



Australian Government



Murray-
Darling
Basin
Authority



Annual Report

2022–23



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Acknowledgement of First Nations

The Murray–Darling Basin Authority (MDBA) acknowledges and offers its respect to the Traditional Owners and their Nations of the Murray–Darling Basin. The contributions of earlier generations, including the Elders, who have fought for their rights in natural resource management are also acknowledged, valued and respected.

The MDBA recognises and acknowledges that the Traditional Owners and their Nations in the Murray–Darling Basin have a deep cultural, social, environmental, spiritual and economic connection to their lands and waters. The Authority understands the need for recognition of Traditional Owner knowledge and cultural values in natural resource management associated with the Basin. Further research is required to assist in understanding and providing for cultural flows.

First Nations of the Murray–Darling Basin

Barapa Barapa	Kunja	Ngunnawal/Ngunawal
Barkandji (Paakantyi)	Kureinji	Nguri
Barranbinya	Kwiambul	Nyeri Nyeri
Barundji	Latji Latji	Peramangk
Barunggam	Maljangapa	Tati Tati
Bidjara	Mandandanji	Taungurung
Bigambul	Maraura	Wadi Wadi
Budjiti	Mardigan	Wailwan
Dhudhuroa	Murrawarri	Wakka Wakka
Dja Dja Wurrung	Mutthi Mutthi	Waywurru
Euahlayi	Nari Nari	Wemba Wemba
Giabel	Ngadjuri	Wergaia
Githabul	Ngambri	Wiradjuri
Gomeri/Kamilaroi	Ngarabal	Wolgalu
Gundungurra	Ngarigo	Wotjobaluk
Gunggari/Kungarri	Ngarrindjeri	Yaitmathang
Gwamu (Kooma)	Ngemba	Yita Yita
Jarowair	Ngintait	Yorta Yorta
Kambuwai	Ngiyampaa/	
Kurna	Wongai-bon	

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About this annual report



The Murray–Darling Basin Authority Annual Report 2022–23 gives an overview of performance from 1 July 2022 to 30 June 2023. It reviews performance against the purpose and goals published in the Portfolio Budget Statements and the *Murray–Darling Basin Authority Corporate Plan 2022–23*.

Part 1	Overview	Includes a foreword by the Authority Chair, the Chief Executive's review and an overview of the Murray–Darling Basin and the Murray–Darling Basin Authority
Part 2	Performance	Presents the Murray–Darling Basin Authority's performance statement for 2022–23 and priorities for the next reporting period
Part 3	Management and accountability	Includes governance and accountability details including the organisational structure and how the business is run
Part 4	Financial statements	Contains the Chief Finance Officer's report, financial statements and the independent auditor's report
Appendices		Contains the glossary, abbreviations, table of annual report requirements, details of the accountable authority, and index

Letter to the Minister



Office of the Chief Executive

Ref: EC23-000656

The Hon. Tanya Plibersek MP
Minister for the Environment and Water
PO Box 6022
Parliament House
CANBERRA ACT 2600

Dear Minister

It is my pleasure to present the Murray-Darling Basin Authority (MDBA) Annual Report for the 2022-2023 financial year.

During the year the MDBA has continued to:

- drive the implementation of the Murray-Darling Basin Plan in collaboration with communities, governments, and industries of the Basin
- direct the sharing of water of the River Murray on behalf of Basin governments.

The Annual Report has been prepared in accordance with section 46 of the *Public Governance, Performance and Accountability Act 2013* (Cth) and section 214 of the *Water Act 2007* (Cth).

I certify that the MDBA has prepared fraud risk assessments, fraud control plans and practices, fraud prevention, detection, investigation, and reporting, and data collection in compliance with the Commonwealth Fraud Control Framework. I also certify that I have taken all reasonable measures to minimise the incidence of fraud in the MDBA.

I would like to acknowledge the commitment of MDBA staff and their contribution to achieving a healthy, productive Murray-Darling Basin.

Yours sincerely

A blue ink signature of Andrew McConville.

Andrew McConville

4 October 2023

Office locations – First Nations Country

Adelaide – Kurna | Canberra – Ngunnawal | Goondiwindi – Bigambul | Griffith – Wiradjuri
Mildura – Latji Latji | Murray Bridge – Ngarrindjeri | Wodonga – Dhudhuroa

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Part 1

Overview

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Foreword by the Authority Chair



The Murray–Darling Basin Authority (MDBA) continued to oversee management of water resources in the Basin for the benefit of all Australians this year, through ongoing partnerships that were forged for the Basin Plan more than ten years ago.

As I toured the towns in the north and south of the Basin this reporting period, I reflected on our responsibilities now and 50 years from now, as we navigate the year's challenges of flooding and face our future of more extremes, in an overall hotter, drier climate with less water to go around.

I also acknowledge an Australian Government that is committed to implementing the Basin Plan in full. Now more than 12 months in office, government has been supported by the MDBA, providing independent advice on implementing the Basin Plan.

In a year of widespread flooding across the Murray–Darling Basin, together we witnessed the extreme conditions for which the Basin is well known. In the south, a free-flowing Murray River stretched some 2,000 kilometres from Yarrawonga on the Victoria–New South Wales border to the sea at the Murray Mouth in South Australia. In the north, the Barwon and Darling (Baaka) rivers and lake systems are brimming with breeding birds and fish after 3 wet years.

While wetlands were springing to life, my thoughts continued to be with the families and all those who lost loved ones in the floods of 2022. Throughout the Basin, swollen rivers and flooding resulted in communities being challenged by loss of crops, livelihoods and wellbeing.

We recognise that the road to recovery can be a long and challenging process. Building resilience is no easy feat. We remain committed to strong and open engagement across the Basin, as everyone's experience and perspective is valuable, in flood and in drought.

I have had the pleasure of meeting a great many people in Basin communities since I became Chair and I am often reminded that the next dry period could be just around the corner. The latest Bureau of Meteorology forecast suggests this, and we need to be prepared. Combined with the effect of climate change, we can anticipate a warmer and drier future, with more frequent and extreme weather events. It is important that we have the best science to support future management of the Basin's water resources.

In the past year, a wealth of knowledge and expertise has bolstered the MDBA's science focus including the independent and strategic advice of the Advisory Committee on Social, Economic and Environmental Sciences, led by outgoing chair Professor Rob Vertessy until December 2022 and acting chair Dr Rebecca Nelson.

Our Regionalisation Program has been a great success. We now have more than 130 staff working from 6 MDBA offices outside of Canberra across the Basin, including river operators, scientists and finance and engagement people. Our Chief Executive Andrew McConville spends a considerable amount of his time working from these offices. All of this has enhanced our communication and connection with communities across the Basin.

Andrew McConville has now completed one year in the role of Chief Executive. I thank him for his strong and dynamic leadership. His emphasis on teamwork and collaboration has yielded great results across the organisation.

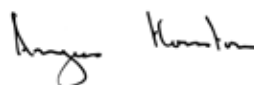
Acknowledging that water policy and management is enhanced by the collective wisdom of governments, communities and industry, I recognise a great many others who have contributed their time and skill to our important work. I thank all who have shared their time to meet with me and the MDBA, and those who regularly contribute to our thinking including the members of the 6 Regional Community Forums.

I acknowledge also, the significant contribution of the Basin Community Committee led by the steady hand of Phil Duncan. During his 3-year term, Phil elevated the voice of the Committee, and its focus on collaboration and building stronger relationships, and will continue to do so as a valued member of the committee. Rachel Kelly was appointed as Chair in June 2023 and brings valuable experience to her leadership of this important source of independent community advice to the Authority.

The MDBA connection to Basin communities, First Nations people and the science community will continue to serve us well as the time for evaluation and review of the Basin Plan approaches. In June 2023 I was pleased to launch our Roadmap to the 2026 Basin Plan Review, which steps through the work ahead over the next 3 years to confront and respond to the challenges of water management in the Basin in the coming decade.

All voices are welcome to be part of the conversation that will shape Australia's most important river system for future generations.

Finally, I thank the Board members, the Executive Team and all staff of the MDBA for their dedication and professionalism in a demanding year.



Air Chief Marshal Sir Angus Houston AK, (Ret'd)

Authority Chair

Chief Executive's review



It is my great pleasure to present the Murray–Darling Basin Authority annual report 2022–23. In a year that will be long remembered for significant flooding and active collaboration to progress the Basin Plan, this report demonstrates the breadth of our commitment to our purpose of achieving *Rivers for generations*, ensuring a sustainable Basin and planning for the opportunities ahead.

Volumes of flow in the rivers and across floodplains were extraordinary in 2022. Rainfall was the highest on record for October in large parts of the Murray–Darling Basin across New South Wales, Victoria and Queensland. At their peak, the 30 major dams of the Basin together held 101 per cent capacity – an unprecedented volume of water in storage which was reflected in the spill of Dartmouth Dam for the first time in 26 years. Floods persisted from spring through to late summer, moving steadily from the upper reaches of the northern Basin and the Murray system to the end of the system in South Australia.

The impacts on communities, livelihoods and wellbeing were devastating for many people. Our thoughts continue to be with the families impacted by the 2022 floods and those who tragically lost their lives. Recovery for towns, crops and businesses takes time and many communities are still working through the aftermath.

While the weather and flow of water through the Basin demonstrated its formidable power to take from our communities, it also brought struggling wetlands and ecosystems to life. With replenished floodplains, wetlands, creeks and billabongs comes greater resilience for the plants and animals of the Basin.

As drier conditions appear on the near horizon, we end the year with an eye to the future but with healthy dam levels and flowing rivers as a source of confidence for communities and river managers alike.

Meanwhile, at the MDBA we have kept our eye firmly on our 2 essential jobs: to oversee and report on progress to fully implement the Basin Plan and to operate the River Murray system effectively on behalf of the Basin governments.

I am pleased to report once again that progress was made on all our priorities. We end the year having achieved much, but very conscious that there is a tremendous amount of work before us.

Implementation of the Basin Plan

The Basin Plan is fundamental to balanced water management, addressing the needs of communities, industries and the river system itself. Working together with the Australian Government, and state and territory governments has resulted in another year of progress in Basin Plan implementation. Our key performance indicator of having an operational Basin Plan that is adaptive to changing conditions has been largely achieved.

It was pleasing to have recommended 5 New South Wales water resource plans to the Australian Government Minister for the Environment and Water for accreditation. These are in addition to another 8 plans with the MDBA by the end of the year for assessment against the 55 requirements of the Basin Plan. This is a notable step forward and I would like to acknowledge the renewed efforts and commitment of the New South Wales Government. We anticipate the state's remaining 7 plans in the coming year.

Having all water resource plans operational will see our performance target on their accreditation met. It will mean the Inspector-General of Water Compliance can effectively oversee compliance of water take by Basin governments right across the Basin. Water resource plans are already accredited and operational in Queensland, South Australia, Victoria and the Australian Capital Territory and it is very important that New South Wales also moves to this point.

We also welcomed the Australian Government's funding commitment for the MDBA's major 3-year work program to prepare for the first review of the Murray–Darling Basin Plan in 2026. Preparations are underway on a number of fronts to establish constructive engagement with the full range of stakeholders.

We are also updating our science and knowledge through programs such as the multidisciplinary Murray–Darling Water and Environment Research program and the revival of the Murray–Darling Basin Sustainable Yields and the Sustainable Rivers Audit, which received funding in the October 2022 federal budget.

Sustainable diversion limits (SDL), which represent the long-term average annual limit of consumptive water use in the Murray–Darling Basin, underpin the rules of water use in the Basin. One of our key responsibilities is to monitor and report on how much water was taken for each of the 109 SDL areas and for the Basin as a whole. To that end we updated for 2022 the SDL Accounting and Reporting Framework, produced the 2021–22 SDL Accounts – Registers of Take and, in the case of New South Wales (given the absence of accredited water resource plans), the Interim Registers of Take, which were then provided to the Inspector-General of Water Compliance.

Transparency is a cornerstone of the MDBA's operations, as is independent assurance on work that will have a material impact on water management in the Basin. Approaching the 2024 deadline for state government project delivery to adjust the Basin Plan's SDLs, we released the MDBA's SDL Adjustment Mechanism Annual Assurance Report in November 2022. The assurance report predicted a shortfall in water savings achieved by state government projects, and we continue to prepare for a reconciliation in 2024 of the actual water savings against the estimates calculated in 2017.

Even in very wet years it is important that water for the environment is managed carefully and for maximum benefit of the Basin river system, as envisaged in the Basin Plan. In consultation with the Basin states and the Commonwealth Environmental Water Holder, and with input from various committees, we developed the priorities for the use of environmental water. Fish and bird breeding were supported by environmental flows as well as refuge flows provided where fish deaths were an unfortunate consequence of blackwater events, particularly in the Lower Darling (Baaka).

The Authority approved the First Nations Participation in Water for the Environment report 2021–22.

This annual report documents how holders of environmental water have involved Indigenous people and considered Indigenous values and uses when planning environmental watering in the Murray–Darling Basin (s175 Water Act). It is pleasing to see good progress, with Basin governments working to ensure First Nation voices have been, and will continue to be, included in key planning processes.

Operating the River Murray system for partner governments

Management of the River Murray system on behalf of the Australian, New South Wales, Victorian, Australian Capital Territory and South Australian governments is a complex undertaking that is supported by highly skilled and knowledgeable staff at the MDBA.

Our close and ongoing collaboration with partner agencies, including the Bureau of Meteorology, Goulburn–Murray Water, WaterNSW, SA Water, New South Wales Department of Primary Industries, Victorian Department of Energy, Environment and Climate Action and South Australian Department for Environment and Water has been a crucial part of our integrated management of water resources this past year.

Floods in the River Murray system presented new challenges, exemplified by events such as November's daily inflow to the system being 7 times the long-term average. In accordance with the Murray–Darling Basin Agreement, the MDBA's management of the Hume and Dartmouth dams focused on dam safety as a priority and in line with changing conditions. In addition, the MDBA's river operators worked around the clock over many months to mitigate flooding as much as possible. I would like to recognise their hard work and commitment in undertaking a difficult and at times thankless task. More than twice the volume of Hume Dam was carefully released during a period of 6 months.

In line with our commitment to transparency, throughout this time we communicated consistently and regularly with impacted communities, alongside our partner agencies, to keep them informed of changes, as well as keeping the broader community aware of conditions in the Basin.

Reflection and review are crucial steps to ensure ongoing improvement in river management. As such, an assessment of flood management has been initiated, and we expect to be able to report findings to the Murray–Darling Basin Ministerial Council early in the 2023–24 year.

In addition, the Independent River Operations Review Group presented their review for 2021–22, which confirmed the Authority had fulfilled its obligations during the year, meeting our many challenges with innovation and adaptation.

Early work on behalf of Basin governments has also focused on the next phase of the Barmah–Millewa Program, which aims to address the tightening constraints in capacity through this important part of the river. Engaging with local communities and state governments to further this program will be an important part of our work in the coming year.

Based on monitoring results from 2021–22, our target for the environmental health of key icon sites through the Living Murray program was met with improvement or maintained good conditions recorded for 5 of the 7 sites. The wet conditions of 2021–22, combined with more water for the environment, favoured the achievement of ecological objectives. While 2 sites remain in fair or poor condition without further decline, environmental health for all sites was found to be among the best since monitoring started.

Improving transparency and confidence in the Basin Plan

All Australians have a stake in the health of the Murray–Darling Basin and its future. That's why transparency and confidence in the Basin Plan, in River Murray operations and our approach to our work at the MDBA is critical to progress the water reform needed to help achieve rivers for generations.

Those who live and work in the Basin are especially invested in sustainable water management. That's why we have again maintained strong connections with communities from the north to the south. I was delighted that our River reflections annual conference was held in Narrabri in northern New South Wales in June 2023, bringing people together from across the Basin to hear and learn from each other's experiences, with a northern Basin flavour.

Our increasing face-to-face engagements are continuing to build trust with Basin communities, supported by our strong regionally based teams in Mildura, Griffith, Murray Bridge, Wodonga, Goondiwindi and Adelaide.

Regional Engagement Officers living amongst and connecting with Basin communities and industry continue to provide the essential touchpoint for people to connect and engage with us and for the MDBA to listen and understand communities. I would like to

thank the MDBA staff and everyone who has been so generous with their time and advice in my many visits to places across the Basin. These visits are crucial. They ensure that we all understand issues, that we build trust, and that we establish a way of moving forward together.

I was also delighted that we continued to strengthen collaboration with our state and federal government partners through Basin listening tours led by Authority Chair Sir Angus Houston. These also help to bring together the diverse perspectives of Basin communities.

Applying best science and knowledge

Evidence is the foundation for our advice and decision making, so we rely on up to date and robust science and knowledge in our management of Basin and water policy. Together with the Murray–Darling Water and Environment Research Program, the Basin Condition Monitoring Program and the Integrated River Modelling Uplift Project, this expanding capability across economic, social and environmental needs will build a solid basis for the 2026 Basin Plan review.

I have every confidence that these programs, which bring together the science community, First Nations, industry, community and government, will steer water policy and management in a way that best meets the future challenges of the Basin, its industries and communities.

Looking ahead

This year the Chair of the MDBA, Sir Angus Houston, launched the Roadmap to the 2026 Basin Plan Review, which steps through each critical phase of work over the next 3 years, to ensure the Review is built on sound, defensible foundations.

The Roadmap sets the scene for the years ahead, which will focus on gathering and sharing early insights with stakeholders. We will capture the value Australians place on the Basin including the social, economic, environmental and cultural value of the rivers and towns, the farms and the wetlands of the Basin, which is one of Australia's greatest environmental and economic assets.

Four themes will guide activities: climate change, sustainable water limits, First Nations people and regulatory design. We will consider the lived experience, traditional and community knowledge, economic impacts and perspectives across the Basin.

After 3 years of incredible rainfall, the variability of our climate is about to challenge us again. The Bureau of Meteorology has dialled up their expectation of drier and warmer conditions for most of Australia, the likelihood of a positive Indian Ocean Dipole and a return to El Niño foreshadowed.

In the year ahead we must take the remaining steps necessary to deliver the successful implementation of the Basin Plan. We will have a particular emphasis on the finalisation of outstanding New South Wales water resource plans, and later in the year the sustainable diversion limit adjustment mechanism reconciliation.

The MDBA is committed to being in community, building long-lasting trusted relationships through transparent and ongoing connection and communication. That's the value of having offices and staff throughout the Basin. Today we have about 130 staff outside Canberra, from finance people to river operators, scientists to engagement officers. It's through our connection in the community that we get a better understanding of the different points of view and can share and learn from what we hear.

Finally, but certainly not least, I want to recognise and thank the entire MDBA team for their efforts this year in supporting the implementation of the Basin Plan and running the River Murray on behalf of Basin governments.

The team has embraced the call to work differently, challenging ourselves to be always better, embracing our purpose and values. They bring great energy in wanting to achieve a healthy and sustainable river system in the Murray–Darling Basin, because we know it is in the national interest. Our work often takes courage because it is in equal measure engaging and challenging. Our work is always rewarding because we are deeply committed to rivers for generations.



Andrew McConville
Chief Executive

The Murray–Darling Basin is Australia's largest and most complex river system. It spans 4 states and 1 territory, and covers an area of more than a million square kilometres



16 internationally recognised and protected wetlands



\$22 billion agriculture industry



Home to 2.3 million Australians



Towns & rural communities rely on a healthy river system



Australians visit their rivers & lakes for recreational & social activities



More than 50 First Nations



\$11 billion tourism industry



7,300 irrigated agriculture businesses



120 waterbird species & more than 50 native fish species

Figure 1: Key aspects of the Murray–Darling Basin

About the Murray–Darling Basin



The Murray–Darling Basin in south-eastern Australia is one of Australia's greatest natural assets. It functions as an economic and ecological powerhouse providing extensive benefits to all Australians.

The Murray–Darling Basin is called a 'basin' because it's a catchment area where water collects and drains – in this case into the Murray and Darling (Baaka) rivers and eventually out into the Southern Ocean.

A network of interconnected rivers, floodplains and groundwater reserves, the Basin covers more than one million square kilometres; some 14% of Australia's vast land mass. It includes most of New South Wales, some of southern Queensland, the east of South Australia, northern Victoria and all of the Australian Capital Territory.

Figure 1 shows many of the reasons why the Murray–Darling Basin is important. More than 2.3 million people live in the Basin and rely on healthy rivers. The Basin is one of Australia's most productive agricultural regions, containing around 40% of our farms and producing a large proportion of our food and fibre – around a third of our dairy, three-quarters of our grapes as well as cotton and many horticultural crops such as fruit, nuts and vegetables.

In addition to supplying Australian markets, some commodities are exported around the globe to valuable international markets.

Among those living in the Basin are people from more than 50 First Nations. Water is integral to the cultural identities, cultural practices and cultural obligations of these First Nations, and their custodianship of Country

(lands and waters) in the Basin. First Nations' deep, enduring and ongoing spiritual, cultural, environmental, social and economic connections to the lands and waters in the Basin have existed since time immemorial. First Nations rightly seek increased recognition, respect and involvement in water planning and management, and access to and ownership of water.

Basin waters give life to plants, animals and fish including 120 species of native and migratory birds and more than 50 species of native fish. The unique natural environments of the Basin are highly valued. Over 100 sites are registered as nationally important, and some are recognised as internationally important under the Ramsar Convention. Seven icon sites are cared for under the Living Murray program because of their ecological and cultural significance.

The Basin also supports a thriving tourist industry worth \$11 billion each year, which contributes significantly to sustaining local communities.

Find out more about the Murray–Darling Basin and why it's important on the MDBA website [mdba.gov.au/basin].

At its heart, the Basin Plan sets the amount of water that can be taken each year, while leaving enough to sustain a healthy river system.

Figure 2: Key elements of the Basin Plan



The Murray–Darling Basin Plan

The Basin Plan establishes the arrangements for managing the Basin as a whole system for the Australian community. It was recognised that a whole-of-Basin approach was needed to manage the Basin's water resources in the national interest, and to meet Australia's international obligations. Figure 2 shows the 6 key elements of the Basin Plan.

The Basin Plan is a shared responsibility. It embeds a coordinated approach to water management across the Basin states of New South Wales, Queensland, South Australia, Victoria and the Australian Capital Territory.

To implement it, the MDBA works with many Australian Government and state government partners in addition to various industry, environmental, community and First Nations people.

Preparation has begun for an extensive review of the Basin Plan in 2026 [mdba.gov.au/water-management/basin-plan/2026-basin-plan-review] with a roadmap charting the next 3 years released in June 2023.

The Basin Plan Review will be the Authority's vehicle for delivering advice to government on the settings of the Basin Plan for the years ahead; settings that ensure the Basin Plan is sensible, defensible and sustainable.

You can find out more about the Basin Plan, including its development and implementation on the MDBA website [mdba.gov.au/water-management/basin-plan].

About the Murray–Darling Basin Authority

The Agency

The Murray–Darling Basin Authority operates under the *Water Act 2007* (Cth) (the Water Act).

We are an independent statutory agency in the Australian Government. We are responsible for planning the Basin's water resources, with all planning decisions made in the interest of the Basin as a whole.

We work with Basin states, industries and communities to manage the Murray–Darling Basin's water resources.

We are working with our partners towards a resilient Murray–Darling Basin, where rivers function through the extremes of our changing climate, and where communities are ready for their future.

We are committed to taking a whole-of-Basin view to ensure all social, economic, environmental and cultural perspectives are considered as we protect our rivers for generations.

Our most important work is to:

- prepare, implement and review an integrated plan for the sustainable use of the Basin's water resources
- operate the River Murray system and efficiently deliver water to users on behalf of partner governments
- measure, monitor and record the quality and quantity of the Basin's water resources
- support, encourage and conduct research and investigations about the Basin's water resources and dependent ecosystems
- advise the Australian Government water minister on the accreditation of state/territory water resource plans
- provide water rights information to facilitate water trading across the Basin
- engage and educate the Australian community about the Basin's water resources.

Portfolio and ministers

The MDBA is a portfolio agency of the Department of Climate Change, Energy, the Environment and Water, reporting to the Hon Tanya Plibersek MP, the Minister for the Environment and Water.

Our purpose

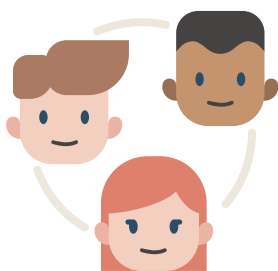
Rivers, for generations.

Our role

Through our goals we aim to advance the sustainability, productivity, wellbeing and resilience of the Murray–Darling Basin and its communities.

The MDBA has 2 goals:

- drive the successful implementation of the Basin Plan
- operate the River Murray on behalf of the Basin governments.



In making decisions, the MDBA considers science and knowledge, along with the views of communities and key stakeholders. We make our decision making processes transparent to build confidence in the Basin Plan, River Murray operations and the MDBA.

Engaging with stakeholders

Engagement with Basin stakeholders is pivotal to the success of the Basin Plan and to effective operation of the River Murray system. This is no small task, given that there are more than 1,000 stakeholder groups with an interest in the implementation and outcomes of the Basin Plan and MDBA activities.

We approach engagement by fostering shared understandings between all of those with an interest. We build shared understandings by collecting and publishing evidence-based information about the Basin and by listening to our stakeholders.

Scientific knowledge provides the evidence base we operate from. We continually monitor and assess the health of the Basin and distribute the information to stakeholders through various channels.

New science and data are constantly emerging and we strive to make available the best peer-reviewed hydrological, environmental, social and economic sciences.

We also listen to many views. Each stakeholder has their particular perspective. Local communities are important, since they often understand their stretch of river better than anyone. Their local knowledge contributes to the knowledge base for water management in the Basin.

We recognise the knowledge of First Nations peoples, respecting their knowledge of Country and obligations to care for Country. Understanding the importance of these deep knowledge systems and their inclusion, where shared appropriately, improves outcomes for the Basin.

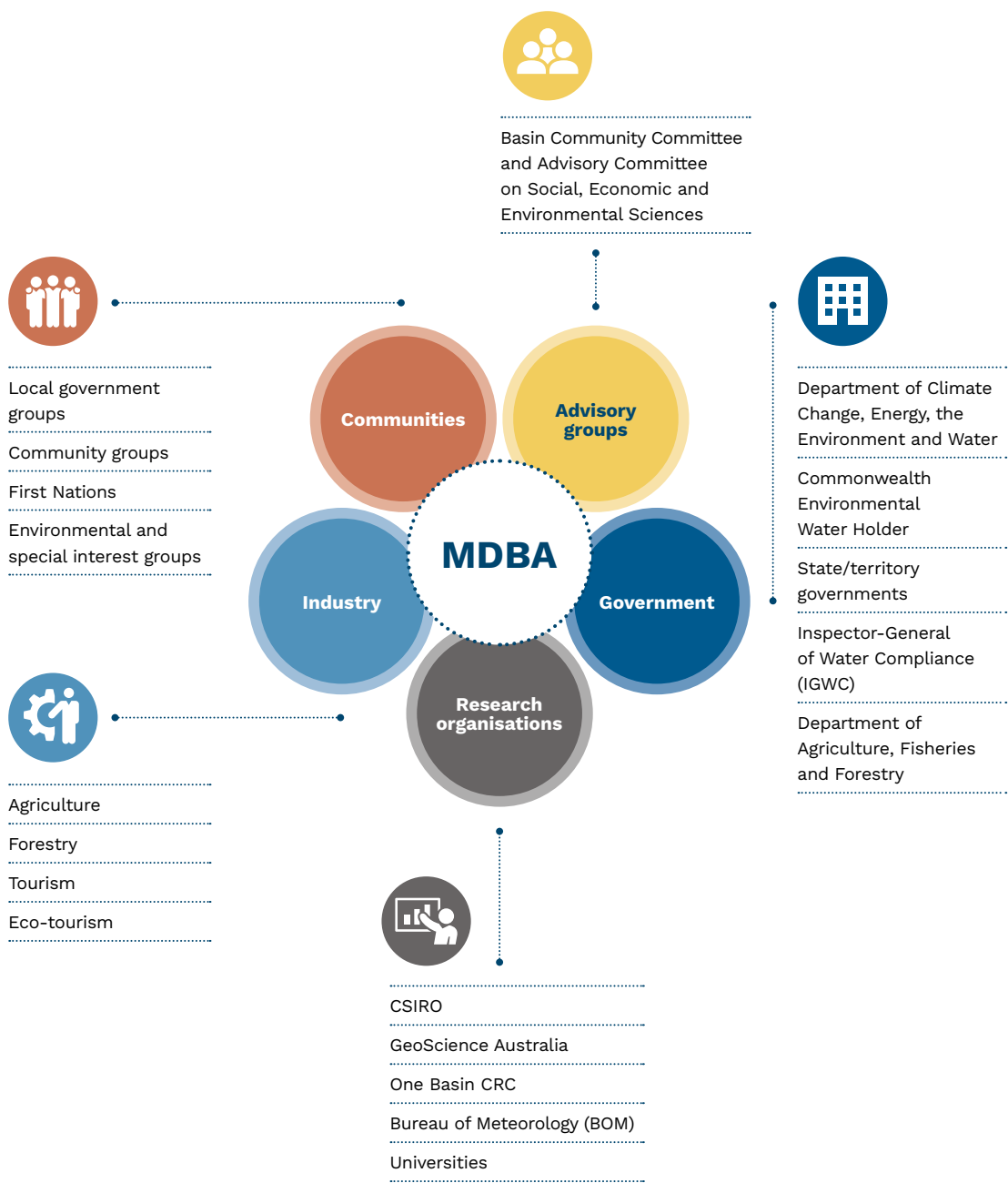
Figure 3 shows MDBA main collaborations and interdependencies. Key among them are:

- **Australian Government agencies** – we work with other agencies with roles under the Water Act including the Department of Climate Change, Energy, the Environment and Water, the Commonwealth Environmental Water Holder, the Bureau of Meteorology, the Inspector-General of Water Compliance and the Australian Competition and Consumer Commission.
- **Basin governments** – we work with the Australian Government and the governments of New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory to coordinate work programs and oversee the implementation of the Basin Plan.

- **First Nations people** – we engage with First Nations people across the Basin to ensure their perspectives are considered in the implementation, monitoring and evaluation of the Basin Plan. There are over 50 Aboriginal Nations in the Basin. MDBA provides support to the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) – a confederation of Indigenous Nations or Traditional Owners in the southern part of the Murray–Darling Basin.
- **Basin communities** – we work with Basin communities through advisory groups, community forums and our Regional Engagement Officers as well as hosting and participating in conferences, field days and events.
- **Science and research communities** – we participate in research collaborations with universities and research organisations including CSIRO, GeoScience Australia, the Bureau of Meteorology and the One Basin CRC.
- **Industry and special interest groups** – we have regular consultations and discussions with local government and special interest groups including industry bodies for agriculture, forestry, tourism and environmental groups.

You can find out more about the stakeholders we work with on the MDBA website [mdba.gov.au/about-us/who-we-work].

Figure 3: MDBA collaborations, interdependencies and stakeholder groups



Case study

Torrential rainfall brings the largest flows to the Murray Mouth for almost 50 years



The 2022–23 water year (June–May) was characterised by exceptional flooding due to above average rainfall across much of the Murray–Darling Basin.

Daily inflows into the River Murray system for November were 7 times the long-term average. Rainfall was the highest on record for the 3 months August to October for large parts of the Murray–Darling Basin in New South Wales, Victoria and Queensland. The rivers of the northern and southern Basin combined to deliver the largest flow to the Murray Mouth for almost 50 years.

River Murray system inflows during the year were approximately 22,300 gigalitres (GL) (not including releases from Snowy Hydro, inter-valley trade deliveries, managed environmental deliveries from tributaries and inflows to the Menindee Lakes). This has an annual exceedance probability (AEP) of 3%, which means that compared with the historical record since 1896, only about 3% of previous water year inflow totals have been higher.

Inflows to Dartmouth Dam were 1,640 GL, which has an AEP of 4%. Dartmouth spilled in September 2022 for the first time in 26 years. Significant rain events resulted in daily inflows around 24,000 megalitres (ML) per day in early August and 35,000 ML per day in November 2022.

Unregulated inflows to Lake Hume were around 5,390 GL (5% AEP), with a peak daily calculated inflow of around 130,000 ML per day. An instantaneous peak of 141,500 ML was recorded on one day in November 2022.



A debt of thanks is owed to all Basin river operators for their ongoing work during this time to monitor and mitigate flood damage in rivers across the Basin. In the River Murray, operators carefully released more than twice the volume of the Hume Dam's capacity to manage downstream flows.

Even so, many communities across the Basin, industries and farmers were hit hard.

For the environment the floods reconnected rivers with their floodplains, rejuvenating ecosystems and prompting fish spawning and bird breeding.

At the end of the water year Basin water storages were sitting at over 90%, which will see the Murray River system well positioned to provide water for communities and the environment well into 2023–24.

The Authority welcomes findings from a review of flood operations which was requested by the Murray–Darling Basin Ministerial Council to see how flood forecasting and management can be further improved.

From left: Lower Darling (Baaka) inundation at Wilcannia, New South Wales, July 2022. (Image: Jeff Milne); High flows in the Murrumbidgee River from Shepherds lookout, upstream of Burrinjuck Dam, Australian Capital Territory, August 2022. (Image: Will Lucardie); Downstream of Yarrawonga Weir, Victoria, August 2022. (Image: Peter Klowss); Floods rejuvenated ecosystems and prompted fish spawning and bird breeding. Great Egrets, Coombool, South Australia, April 2023 (Image: Helga Kieskamp)

Champions support Regional Engagement Officers

We have established a network of Regional Engagement Officers (REO) across the Basin to bring insights from their local communities to the MDBA. Our REOs act as independent facilitators in the implementation of the Basin Plan. In addition, each REO is paired with an MDBA Champion from our senior executive service to strengthen our connections with communities (see Figure 4).

The REO Program is undertaken in partnership with the Department of Climate Change, Energy, the Environment and Water, which also provides one Australian Government senior executive service partner for each REO. The combined approach strengthens and coordinates engagement with regions.

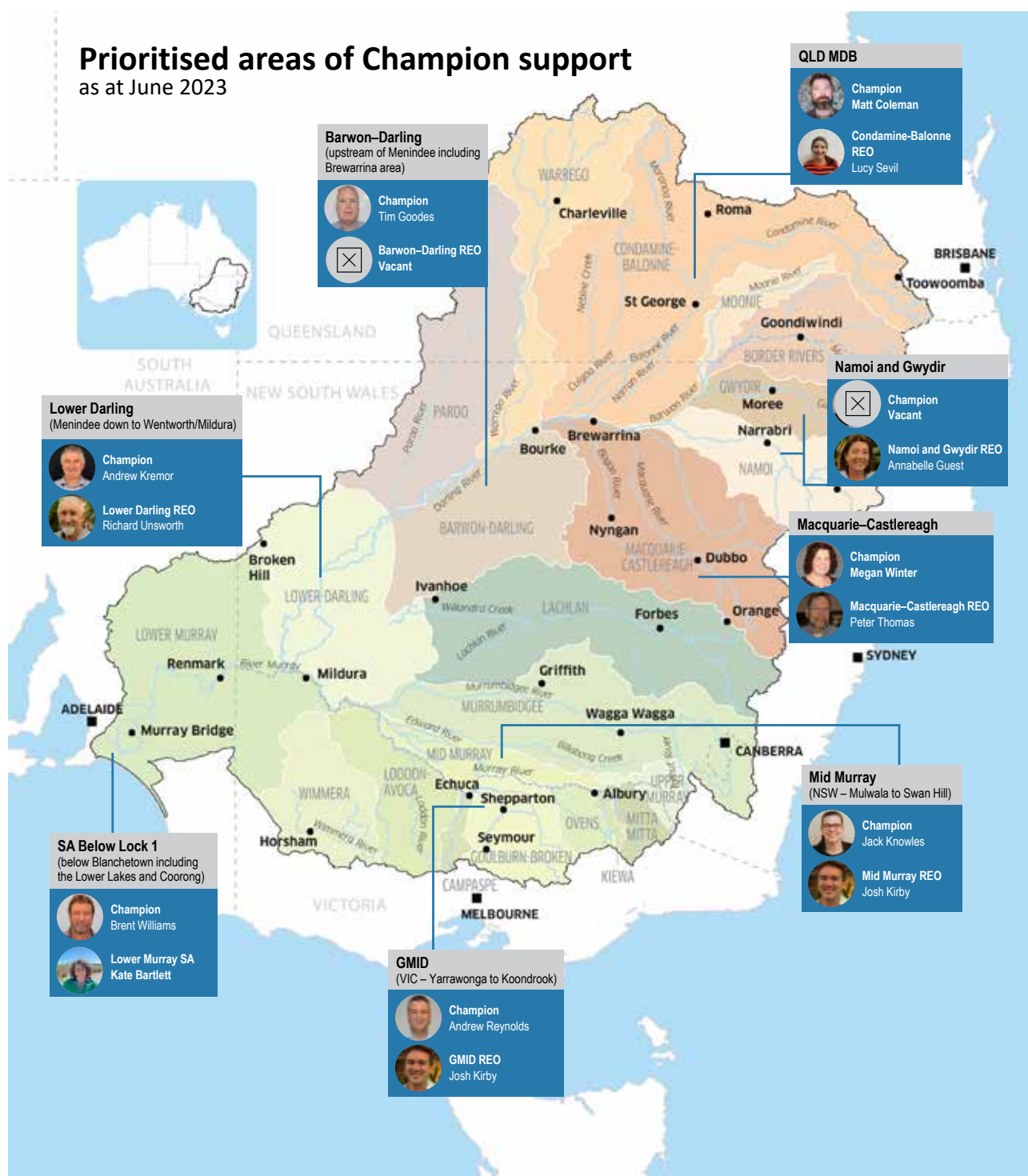
Where we are located

About one-third of MDBA's workforce is located in 6 offices in various parts of the Basin, with the remainder based in Canberra (see Table 1). This strong regional presence brings considerable benefits. There are gains for the communities in which our staff members work, creating jobs and boosting economic diversification, and better communication of community perspectives from staff who have an understanding of local values.

Table 1: MDBA staff per location at 30 June 2023

MDBA office location	First Nations Country	Number of staff and contractors
Adelaide	<i>Kurna</i>	33
Wodonga	<i>Dhudhuroa</i>	18
Canberra	<i>Ngunnawal</i>	349
Goondiwindi	<i>Bigambul</i>	10
Griffith	<i>Wiradjuri</i>	14
Mildura	<i>Latji Latji</i>	25
Murray Bridge	<i>Ngarrindjeri</i>	22
Dispersed		12
Total		483

Figure 4: MDBA REOs and their Champions within the MDBA Senior Executive Service



Our highly skilled staff members are central to achieving our goals.

Our people

Many of our people are specialists with various areas of expertise including hydrology, environmental science, engineering, modelling and project management, as well as law, policy, social science and communication.

To help us maintain the necessary skilled and adaptable workforce over the next 4 years, we have mapped current and future workforce requirements. The Capability and Skills model for MDBA at Figure 6 shows the wide-ranging expertise the agency needs.

Our values

Our values and principles underpin everything we do. We uphold the Australian Public Service (APS) Values of being impartial, committed to service, accountable, respectful and ethical.

Because of our unique context, we are also guided by our MDBA values. During the reporting period we introduced a new set of three values, as set out in Figure 5.

Our values describe how we see ourselves at our best and most purposeful – representing the best of us and how we aspire to be.

These values guide us, bind us and stretch us as we work to learn, grow and increase our impact. Our goal is to live up to these values in every interaction with each other and with the people, the communities and the environment we touch and serve.

Our values acknowledge the connectedness of all things in the Basin and the complex and diverse nature of the work we do in service to its health and sustainability, both now and into the future.

Figure 5: MDBA values

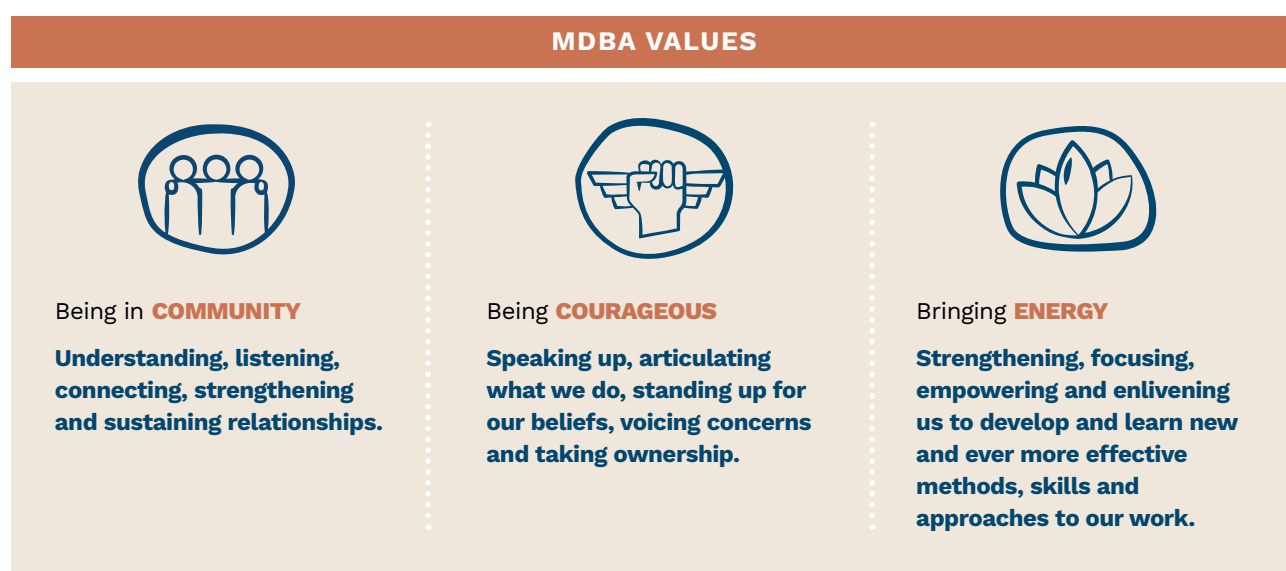
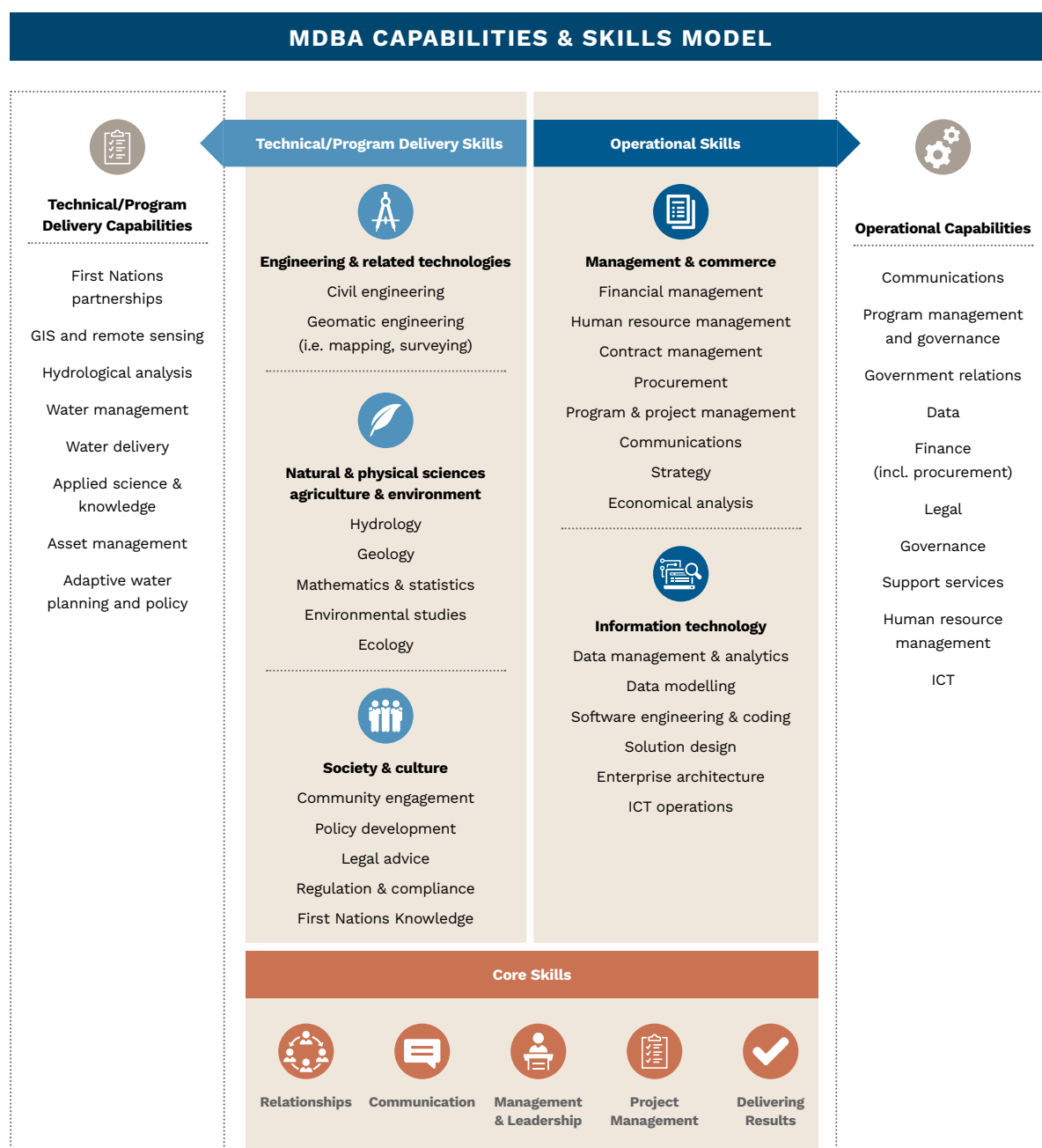


Figure 6: MDBA Capabilities and Skills Model





02



Part 2

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Introductory statement



I, as the accountable authority of the Murray–Darling Basin Authority, present the 2022–23 annual performance statement as required under the Commonwealth *Public Governance, Performance and Accountability Act 2013* (PGPA Act) (paragraph 39(1)(a)).

In my opinion, this annual performance statement is based on properly maintained records, accurately reflects the performance of the entity, and complies with the PGPA Act (subsection 39(2)).



Andrew McConville, Chief Executive

4 October 2023

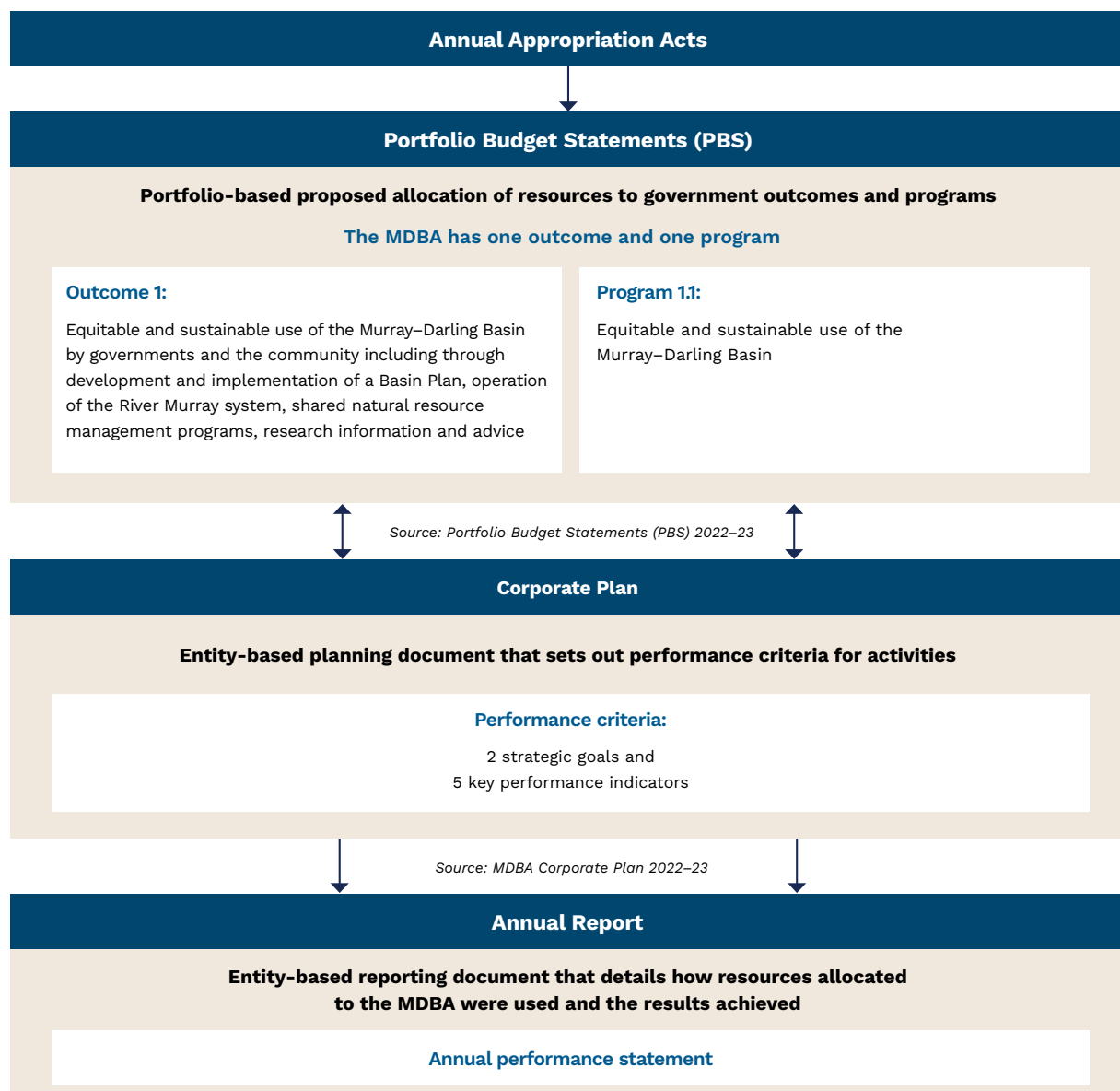
Reporting approach

The PGPA Act sets out how corporate Commonwealth entities, including the Murray–Darling Basin Authority, must report.

Figure 7 shows the links between the annual Australian Government budget statements, the corporate plan and the annual report.

The MDBA manages its performance against a single outcome. The key deliverables are measured against the strategic goals listed in the corporate plan.

Figure 7: MDBA performance framework



The MDBA’s goals, KPIs and measures for 2022–23 are shown in Figure 8. The diagram also indicates the timeframes – short, medium or long term – and whether the measures are qualitative or quantitative. A summary of performance against those targets follows.

Figure 8: Overview of MDBA performance measures for 2022–23





The 2 strategic goals for the MDBA have key performance indicators (KPIs) with measures and targets for each. This allows assessment of whether each goal has been met by the end of the reporting period.

Measures and measure type		Effectiveness	Efficiency	Output	Qualitative	Quantitative	Short term	Medium term	Long term
1.1	Timely assessment of submitted WRP	●				●		●	
1.2	Information from SDL accounting is used to inform decision making	●			●				●
1.3	Effective planning for environmental water use	●		●	●				●
2.1	The MDBA reports on the effectiveness of the Murray–Darling Basin Plan			●	●				●
2.2	Implement a robust, best practice Science Quality Assurance framework			●	●	●	●		●
3.1	Awareness and understanding of the MDBA's role based on market research (conducted every 3 years)	●			●				●
3.2	The MDBA delivers communication, engagement and media activities which improve stakeholder awareness and understanding of the MDBA's role	●			●				●
4.1	The MDBA has coordinated and overseen the asset activities as agreed and approved by the Ministerial Council in the Annual Work Plan			●	●				●
4.2	Number of adverse rulings from jurisdictional dam safety regulators	●				●			●
4.3	Number of unscheduled major outages of assets		●			●			●
4.4	The MDBA has fulfilled its efficiency related obligations under the Objectives and Outcomes as independently assessed		●			●			●
4.5	The MDBA has fulfilled its effectiveness related obligations under the Objectives and Outcomes as independently assessed	●				●			●
5.1	Maintain or improve the environmental health of the 7 key sites of the River Murray system	●				●			●
5.2	The Basin salinity target, as identified in schedule B of the Murray–Darling Basin Agreement, is achieved	●				●			●
5.3	Timely monitoring and reporting on water quality in the River Murray system to aid in decision making		●		●				●

Summary of performance

Table 2 shows a summary of overall performance against the strategic goals, KPIs and measures set in the Murray–Darling Basin Authority Corporate Plan for 2022–23.

Details of measures and an analysis of performance is presented for each goal below the table.

Table 2: Performance against KPIs, 2022–23

Strategic goal	KPI	Result	Comment
Goal 1: Drive the successful implementation of the Basin Plan	KPI 1: The Basin Plan is operational and adaptive to changing conditions	Met	All 3 measures were met
	KPI 2: Use the best available environmental, social, cultural and economic considerations to report on the Basin Plan and make robust and defensible decisions	Met	Both measures were met
	KPI 3: Improve transparency and ensure stakeholders are aware of and understand the MDBA's role	Met	The measure was met
Goal 2: Efficiently and effectively operate the River Murray system for partner governments	KPI 4: Operate the River Murray system in accordance with the Murray–Darling Basin Agreement	Partially met	4 measures were met. One not met as a result of flooding causing delays.
	KPI 5: Maintain and improve the health of the River Murray system (and the Basin where relevant) in accordance with the Murray–Darling Basin Agreement and associated agreements	Met	All 3 measures were met

Goal 1

Drive the successful implementation of the Basin Plan

Role of the MDBA

The MDBA's role is to lead the implementation of the Basin Plan in collaboration with Basin state and territory governments and other Australian government agencies.

Expected impact

- Accreditation of water resource plans (WRPs) which are consistent with the Basin Plan.
- WRPs evolve and adapt to new information. WRPs are recredited to reflect improvements.
- Improved Murray–Darling Basin water resources accounting and reporting.
- Water use across the Basin is reported transparently to enable assessment of compliance with sustainable diversion limits (SDLs).
- Effective use of environmental water.
- Effectiveness of the Basin Plan is known and understood.
- Evidence-based policy and decision making founded on robust and defensible data.

2022–23 key activities

- Assess water resource plans for consistency with the Basin Plan for accreditation including enabling amendments to accredited water resource plans.
- Publish the annual sustainable diversion limits accounts.
- Develop annual watering priorities.
- Undertake assessment of the effectiveness and impact of the Basin Plan.
- Conduct quality research to inform Basin water resource management.

Performance and analysis

Goal 1 has three KPIs:

KPI 1: The Basin Plan is operational and adaptive to changing conditions.

KPI 2: Use the best available environmental, social, cultural and economic considerations to report on the Basin Plan and make robust and defensible decisions.

KPI 3: Improve transparency and ensure stakeholders are aware of and understand the MDBA's role.

Performance on KPI 1: The Basin Plan is operational and adaptive to changing conditions

Table 3: Performance against targets for Goal 1, KPI 1

KPI	Measures	2022–23 Target	Result
KPI 1 The Basin Plan is operational and adaptive to changing conditions	1.1 Timely assessment of submitted WRPs	Assessment conducted in 13 weeks for submitted plans	Met
	1.2 Information from SDL accounting is used to inform decision making	Inspector-General of Water Compliance uses SDL accounting information to inform decisions relating to compliance	Met
	1.3 Effective planning for environmental water use	Delivery of Basin annual environmental water priorities	Met

Note: At 30 June 2023, 5 New South Wales WRPs had been accredited and assessment for these plans was conducted within 13 weeks. The MDBA does not report on plans that are undergoing formal assessment or are yet to be submitted for assessment.

WRPs and SDL accounting are important tools for managing water use.

So too is the delivery of Basin-wide environmental watering priorities to achieve the Basin Plan's long-term goals for native vegetation, waterbirds, native fish, and river flows and connectivity. These were developed in collaboration with First Nations to ensure consideration of their values and uses.

Assessing submitted water resource plans on time

Measure 1.1 is 'Timely assessment of submitted WRP'. The 2022–23 target is 'Assessment conducted in 13 weeks for submitted plans'.

About the measure:

Water resource plans (WRP), which set out the rules on water management at a local or catchment level, are a key part of the Basin Plan. The MDBA assists Basin states to prepare WRPs and assesses and recommends them for accreditation. It is the Australian Government minister responsible for water who accredits WRPs.

Once a water resource plan is accredited, the Inspector-General of Water Compliance is responsible for ensuring compliance with that plan. The process allows for further amendments of WRPs to allow adaptation to changing conditions in the Basin.

The 2022–23 target has been met. All 13 plans for Victoria, South Australia, Queensland and the Australian Capital Territory have been assessed and are accredited and operational.

For New South Wales, 5 plans have been assessed and are accredited, 8 have been formally submitted and are now undergoing assessment. Seven are undergoing drafting and finalisation before submission for assessment.

In this reporting period, accredited plans have moved through the assessment cycle in a timely fashion with MDBA able to assess multiple plans at the same time during parts of the cycle.

You can see a list of Basin state water resource plans, and the status of each, on the MDBA website [mdba.gov.au/water-management/basin-plan/water-resource-plans/list-state-water-resource-plans].



Successful implementation of the Basin Plan relies on having systems in place to set and account for how much water is used across the Basin.

Using sustainable diversion limit accounting in decision making

Measure 1.2 is 'Information from SDL accounting is used to inform decision making'. The 2022–23 target is 'Inspector-General of Water Compliance uses SDL accounting information to inform decisions relating to compliance'.

About the measure:

A register of take for each sustainable diversion limit (SDL) resource unit provides the information that the Inspector-General of Water Compliance needs to decide on compliance with the SDLs. Registers of take are prepared by the MDBA using data provided by Basin states, as set out in the Basin Plan. The Authority aims to provide these to the Inspector-General of Water Compliance (IGWC) by March following the end of the water year. The Authority then publishes the registers of take on the MDBA website in parallel with the IGWC's SDL compliance outcomes.

In addition, the Annual Water Take Report is published by the MDBA 2–3 months after the Registers of Take. It documents the MDBA examination of use across Murray–Darling Basin catchments including information on water use, held environmental water and Cap compliance (subject to a change in the requirement to do so in the legislation).

The 2022–23 target has been met. We completed the assessment of water take and, in September 2022, published the Annual Water Take Report 2020–21 [mdba.gov.au/sites/default/files/publications/annual-water-take-report-2020-21.pdf].

In March 2023, the Authority approved the Registers of Take and subsequently provided the Inspector General of Water Compliance with the Register of Take report for 2021–22. The Inspector General is considering the Registers of Take for 2021–22 and developing views on SDL compliance.

Delivering annual environmental water priorities

Measure 1.3 is 'Effective planning for environmental water use'. The 2022–23 target is 'Delivery of Basin annual environmental water priorities'.

About the measure:

This measure is informed by publication of the Basin annual environmental water priorities on the MDBA website by 30 June each year, for the coming water year.

Division 5 of Chapter 8 of the Basin Plan (Basin annual environmental watering priorities) outlines how watering priorities are prepared.

The 2022–23 target has been met. We published our report on the Basin annual environmental watering priorities for 2023–24 in June 2023 [mdba.gov.au/sites/default/files/publications/environmental-watering-priorities-2023-2024.pdf].

First Nations were consulted, to ensure their values and uses were considered in development of environmental watering priorities. Annual environmental watering priorities were developed following consultation with First Nations, as detailed in the report on *First Nations Participation in Water for the Environment 2021–22* [mdba.gov.au/sites/default/files/publications/first-nations-participation-in-water-for-the-environment-report-2021-22.pdf].

Performance on KPI 2: Use the best available environmental, social, cultural and economic considerations to report on the Basin Plan and make robust and defensible decisions

Table 4: Performance against targets for Goal 1, KPI 2

KPI	Measures	2022–23 Target	Result
KPI 2 Use the best available environmental, social, cultural and economic considerations to report on the Basin Plan and make robust and defensible decisions	2.1 The MDBA reports on the effectiveness of the Murray–Darling Basin Plan	Basin Plan annual report published	Met
	2.2 Implement a robust, best practice Science Quality Assurance framework	Framework is implemented across the agency	Met

KPI 2 supports the successful implementation of the Basin Plan by providing a system for reporting on the effectiveness of the Plan and a quality assurance framework to support decision-making about managing Basin water resources.

Basin Plan annual reporting

Measure 2.1 is ‘The MDBA reports on the effectiveness of the Murray–Darling Basin Plan’. The 2022–23 target is ‘Basin Plan annual report published’.

About the measure:

The MDBA is required to report on the effectiveness of the Basin Plan within 6 months of the end of each financial year under section 52A of the *Water Act 2007* (Cth) (the *Water Act*).

The 2022–23 target has been met. The Basin Plan Annual Report 2021–22 was completed in December 2022. [mdba.gov.au/water-management/basin-plan/basin-plan-annual-reports].

It was endorsed by the Authority and submitted to the Australian Government minister responsible for water by 31 December 2022, as required under section 52A of the *Water Act*. The minister tabled the report in Parliament on 7 March 2023, and it was published on the MDBA website soon after.

Annual reports on the Basin Plan help to focus priorities, acknowledge achievements and identify problems, as well as build trust and confidence in the community about the Basin Plan reforms.

Implementing the Science Quality Assurance framework

Measure 2.2 is ‘Implement a robust, best practice Science Quality Assurance framework’. The 2022–23 target is ‘Framework is implemented across the agency’.

About the measure:

This measure seeks to embed consistent, robust and best practice quality assurance measures across MDBA science projects.

The 2022–23 target has been met. The MDBA’s science quality assurance framework was implemented this reporting period through development of the Science Quality Assurance Guidelines. The guidelines, in the form of an interactive PDF, embed the framework across the agency. They have been made available on the MDBA intranet to standardise processes.

We are exploring other opportunities to build the guidelines into existing business operations to maximise adoption of the framework.

Performance on KPI 3: Improve transparency and ensure stakeholders are aware of and understand the MDBA's role

Table 5: Performance against targets for Goal 1, KPI 3

KPI	Measures	2022–23 Target	Result
KPI 3 Improve transparency and ensure stakeholders are aware of and understand the MDBA's role	3.1 Awareness and understanding of the MDBA's role based on market research (conducted every 3 years)	N/A	N/A
	3.2 The MDBA delivers communication, engagement and media activities which improve stakeholder awareness and understanding of the MDBA's role	Case study: MDBA transparency, communications and engagement activities	N/A

KPI 3 aims to build understanding and awareness of key MDBA activities, including assessing water resource plans, publishing sustainable diversion limits accounts, developing annual watering priorities and overseeing asset management.

Improved transparency and confidence in the Basin Plan, River Murray operations and the Murray–Darling Basin Authority is critical to achieving a healthy working Basin.

Showing improved stakeholder understanding of the MDBA's role

Measure 3.1 is 'Awareness and understanding of the MDBA's role based on market research (conducted every 3 years)'. The 2022–23 target is 'not applicable', as market research was not scheduled for this financial year.

Activities in measure 3.2 will contribute to understanding and awareness, which will be assessed next year.

Improving stakeholder awareness through engagement activities

Measure 3.2 is 'The MDBA delivers communication, engagement and media activities which improve stakeholder awareness and understanding of the MDBA's role'. The 2022–23 target is 'Case study: MDBA transparency, communications and engagement activities'.

The 2022–23 target has been met, with this case study showing the suite of communication and engagement activities delivered across multiple channels to boost transparency and raise awareness of the Basin Plan, River Murray operations and the MDBA.

It was a busy year for engagement, communication and media due to ongoing heavy rain and flooding, which prompted media attention and the need for additional reporting and briefings. Key activities and outcomes are shown in Figure 9.



Figure 9: MDBA transparency, engagement, communication and media activities, 2022–23

Widespread flooding attracted media interest

MDBA's media team responded to 318 journalist enquiries, 96 more than last year (up 43%), and 100 interviews were provided in total over the year.

Journalists asked about management of the Hume and Dartmouth dams including releases; blackwater and fish deaths; icon site report card performance; Barmah Choke, and sustainable diversion limit adjustment mechanism reconciliation.

Strong attendance at River reflections conference

This year's River reflections water conference was held at Narrabri New South Wales in June 2023.

The theme was Connecting Basin communities, industries and ideas. There was strong interest with over 160 people (from 170 available tickets) attending in person and others watching by livestream: 367 watching on Day 1 and 259 on Day 2. By end July, 1,500 viewers watched the recorded proceedings.

For those attending in person, tours were included.

River reflections is about connecting communities, industries and ideas in water management and sharing knowledge, innovation and celebrating achievements in water reform. Attendees heard from 30 speakers over the 2-day program, providing a range of views and insights. The Minister for the Environment and Water, the Hon. Tanya Plibersek provided a Ministerial address by video.

Professor LeRoy Poff gave the keynote presentation on the benefits of the Basin Plan and compared it to the way the Colorado River in the south-western United States and Mexico is managed.

We received very positive feedback from attendees on all aspects of the conference including the structure of the program, the calibre of speakers, the diversity of topics, the relevance to attendees, and accessibility.

You can read more about the conference on the MDBA website [mdba.gov.au/news-and-events/conferences/river-reflections-conference-2023].

Working with First Nations People

We have continued our commitment to relationships with First Nations people, groups and representative bodies, including the Murray Lower Darling Rivers Indigenous Nations (MLDRIN).

There has been an increased focus on local relationships through the MDBA's Regional Engagement Officer Program and the Basin Community Committee Indigenous Water Subcommittee. We continue to work with other Australian Government agencies and Basin states to support the involvement of First Nations People in water management.

MLDRIN participates in the Southern Connected Basin Environmental Watering Committee as advisors, and the Northern Basin Environmental Watering Group (NBEWG) includes the opportunity for membership for up to 2 First Nations People in an advisory role.

We convened the Outlook First Nations Leadership Group, in May 2023 whose broad role is to provide direction, guidance and engagement advice on First Nations matters to the Sustainable Rivers Audit and the Murray–Darling Basin Outlook project.

Goal 2

Efficiently and effectively operate the River Murray system for partner governments

Role of the MDBA

In partnership with Basin governments, promote and coordinate planning, management and sharing of water and other natural resources of the River Murray system and the broader Basin, where relevant. The water sharing and joint management arrangements for this partnership are set out in the Murray–Darling Basin Agreement (Schedule 1, the Water Act). The joint programs are funded by Basin governments and include River Murray Operations (RMO) and natural resource management programs.

The natural resource management programs have evolved as a shared response to the need to manage some of the environmental consequences of water use in the Basin.

A work plan is agreed annually between the joint program parties and MDBA specifying the key activities to be undertaken.

Expected impact

- RMO assets allow management and delivery of water that is fit for the purpose for which it is to be used—efficiently, effectively and safely.
- The waters of the River Murray system are:
 - shared between the states of New South Wales, Victoria and South Australia as per the Murray–Darling Basin Agreement
 - managed to meet multiple outcomes and objectives set by partner governments.
- Improved environmental outcomes in the southern connected system, consistent with the Basin Plan. Delivery of all water for the environment in the southern basin is coordinated, including the jointly held water portfolio. Water management, monitoring and First Nations engagement at the River Murray icon sites supports adaptive management.
- Partner governments jointly manage salinity to deliver the Basin Salinity Management 2030 Strategy, consistent with Schedule B of the Murray–Darling Basin Agreement. The water quality of the River Murray system is monitored consistent with the Murray–Darling Basin Agreement and informs improved management.

2022–23 key activities

- Implement asset management strategies and oversee asset management activities.
- Manage and deliver Basin government water shares in accordance with the Murray–Darling Basin Agreement.
- Maintain and improve the health of the River Murray system (and the Basin where relevant) in accordance with the Murray–Darling Basin Agreement and associated agreements.

Performance and analysis

Goal 2 has 2 KPIs:

KPI 4: Operate the River Murray system in accordance with the Murray–Darling Basin Agreement.

KPI 5: Maintain and improve the health of the River Murray system (and the Basin where relevant) in accordance with the Murray–Darling Basin Agreement and associated agreements.

The MDBA maintains and operates the River Murray system on behalf of partner governments in accordance with the Murray–Darling Basin Agreement, to achieve a healthy working Basin through the integrated management of water resources.

Performance on KPI 4: Operate the River Murray system in accordance with the Murray–Darling Basin Agreement

Figure 10 shows the River Murray system and its assets as well as which agency has responsibility for its operation.

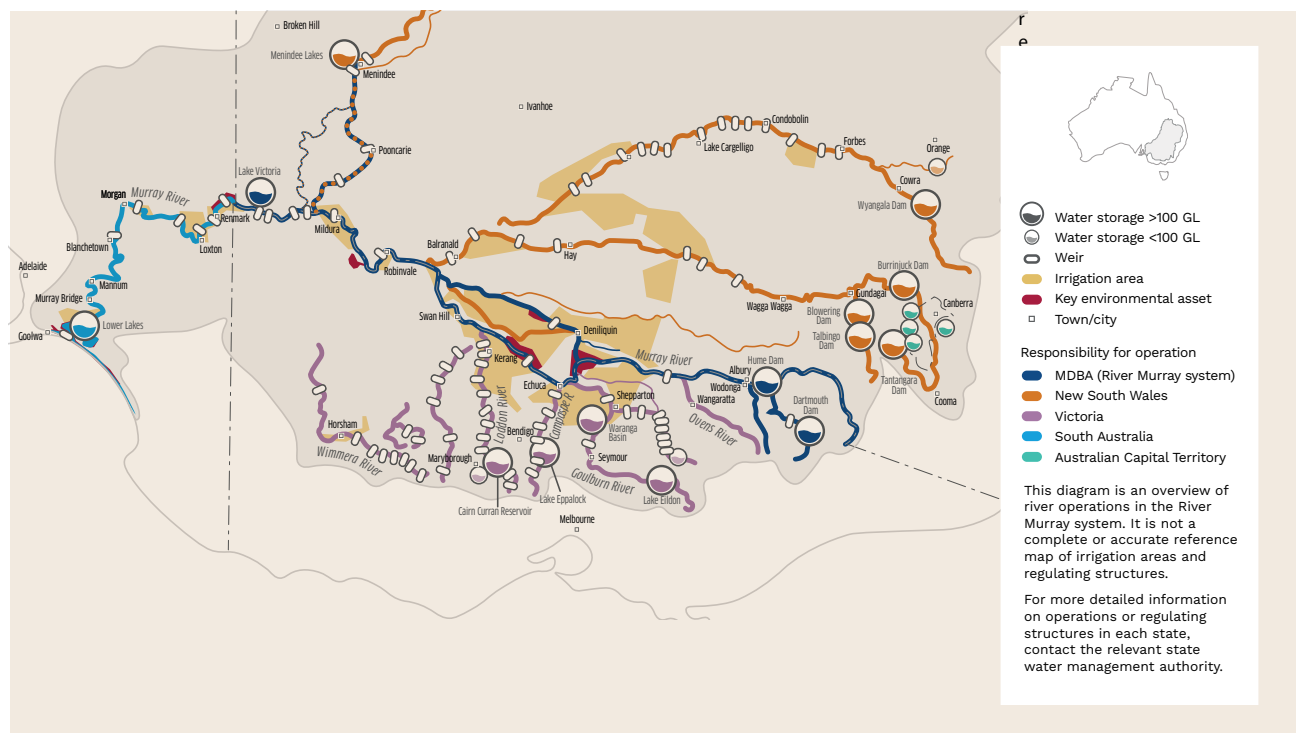
You can find out more about management of the River Murray system on the MDBA website [mdba.gov.au/water-management/river-murray-operations].

Under the Murray–Darling Basin Agreement, Basin states and the MDBA:

- store, manage, deliver and share water using assets (structures such as dams and locks)
- enable navigation
- operate salinity interception schemes
- support recreation and tourism.

We publish regular River Murray updates about rainfall, inflows, salinity and river operations on the MDBA website to keep stakeholders informed.

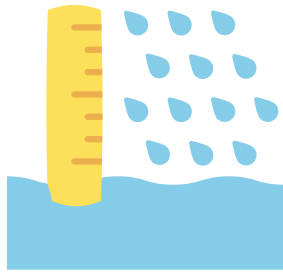
Figure 10: Overview of the River Murray system and tributaries



The table below summarises performance against targets for the measures in KPI 4.

Table 6: Performance against targets for Goal 2, KPI 4

KPI	Measures	2022–23 Target	Result
KPI 4 Operate the River Murray system in accordance with the Murray–Darling Basin Agreement	4.1 The MDBA has coordinated and overseen the asset activities as agreed and approved by the Ministerial Council in the Annual Work Plan	Performance endorsed by the River Murray Operations Committee	Assessment of flood damage and repair costs delayed performance endorsement from River Murray Operations Committee from September to October 2023. Not met.
	4.2 Number of adverse rulings from jurisdictional dam safety regulators	Zero	Met
	4.3 Number of unscheduled major outages of assets	Zero	Met
	4.4 The MDBA has fulfilled its efficiency related obligations under the Objectives and Outcomes as independently assessed	Met	Met
	4.5 The MDBA has fulfilled its effectiveness related obligations under the Objectives and Outcomes as independently assessed	Met	Met



Flood operations dominated river operations across the River Murray system in 2022–23.

Operating the River Murray system in 2022–23

Inflows of approximately 21,880 GL (not including releases from Snowy Hydro, inter-valley trade deliveries, managed environmental deliveries from tributaries and inflows to the Menindee Lakes) made it the sixth highest inflow year in the historic record, which dates back to 1896 (see Figure 11).

The total is around double the volume recorded for the same period in the previous year and around 3 times more than the long-term median inflow volume, which is shown as a black dotted line on the graph.

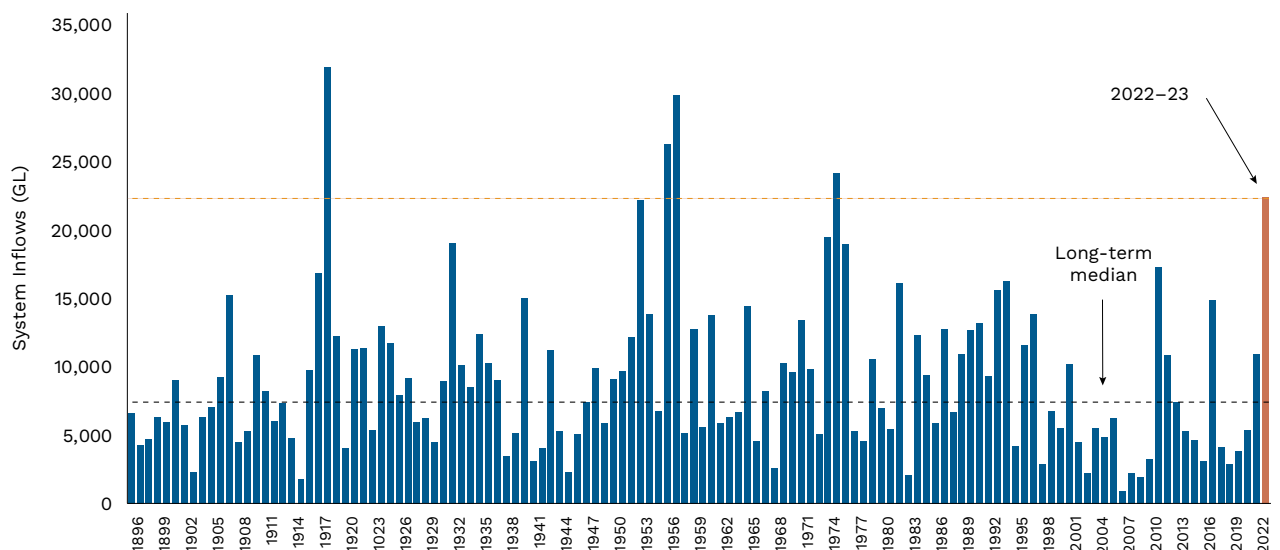
Flow across the South Australian border was unregulated for the entire year with above average rainfall right across the Basin seeing ongoing releases at the major dams to manage airspace and mitigate the effects of flooding.

Dartmouth Dam spilled for the first time since 1996. Major flooding occurred along the length of the River Murray and in major tributaries with devastating impacts on many communities.

MDBA active storage on 1 June 2022 was 8,031 GL, compared with the long-term average for that time of year of 5,089 GL. At the end of May 2023, the MDBA active storage was around 7,600 GL. Active storage remained well above average during 2022–23, with short periods above the maximum active storage level, due to surcharging of the Menindee Lakes.

Figure 12 shows levels in government storages across the Basin at 30 June 2023.

Figure 11: Graph of River Murray system inflows, GL, 1896 to end May 2023



Murray–Darling Basin water in government storages

30 June 2023

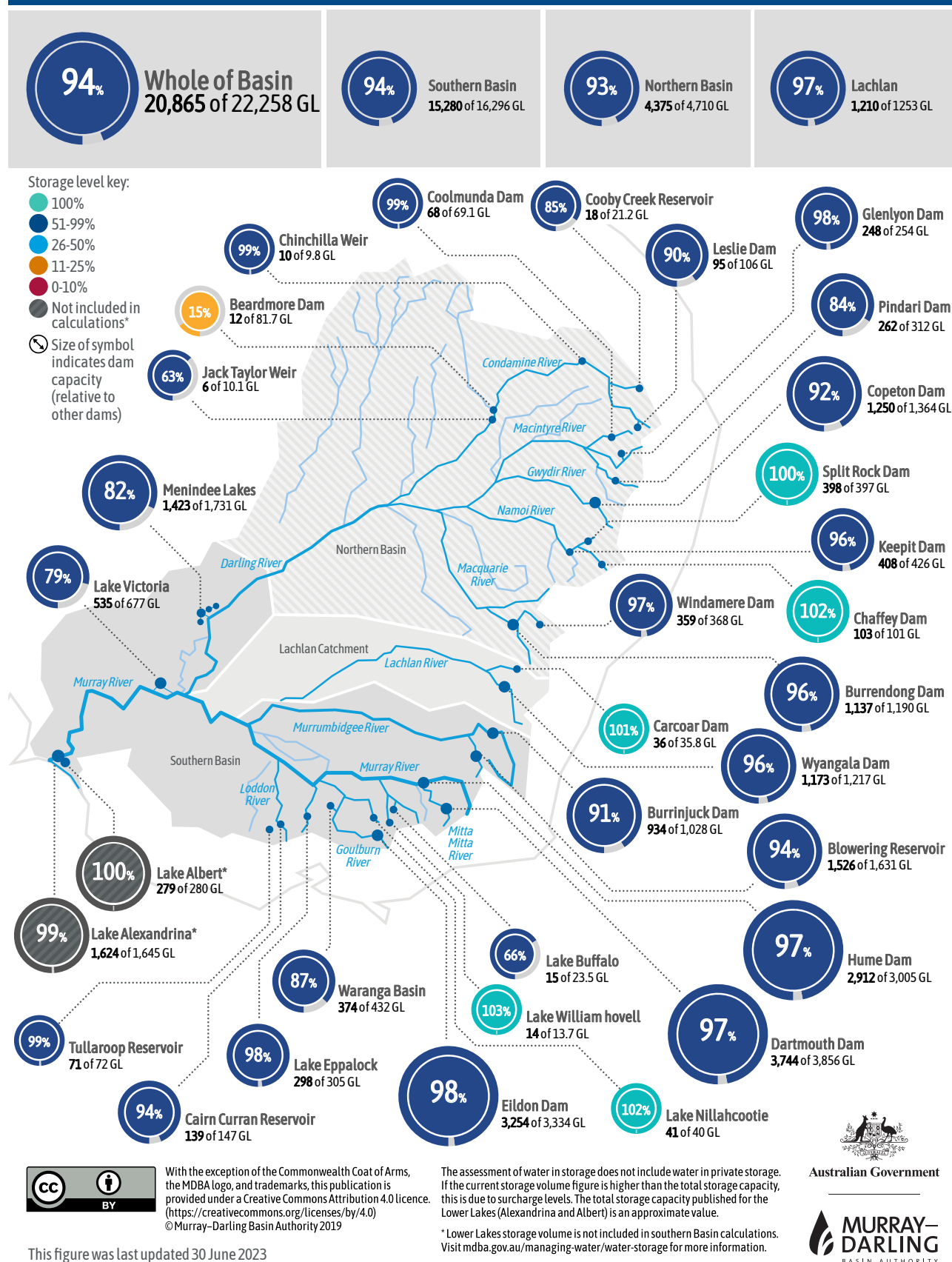


Figure 12: Storage capacity across the Basin as of 30 June 2023

High river flows caused some delays in site inspections and infrastructure works but, by the end of the reporting period, the assets program delivered most of the planned activities plus clean up and repairs needed after flooding.

Overseeing asset activities effectively

Measure 4.1 is 'The MDBA has coordinated and overseen the asset activities as agreed and approved by the Ministerial Council in the Annual Work Plan'. The 2022–23 target is 'Performance endorsed by River Murray Operations Committee'.

About the measure:

Each year the asset activities are agreed and approved by the Ministerial Council and set out in the Annual Work Plan. Assets are the structures used to manage water such as major storages, locks, weirs and barrages.

Coordinating and overseeing the asset activities in the Annual Work Plan demonstrates that:

- work is delivered efficiently and is integrated with operational requirements
- work delivered meets the requirements of the joint venture partners and the Basin Plan
- assets remain able to deliver their required level of service
- the MDBA protects the interests of the partner governments.

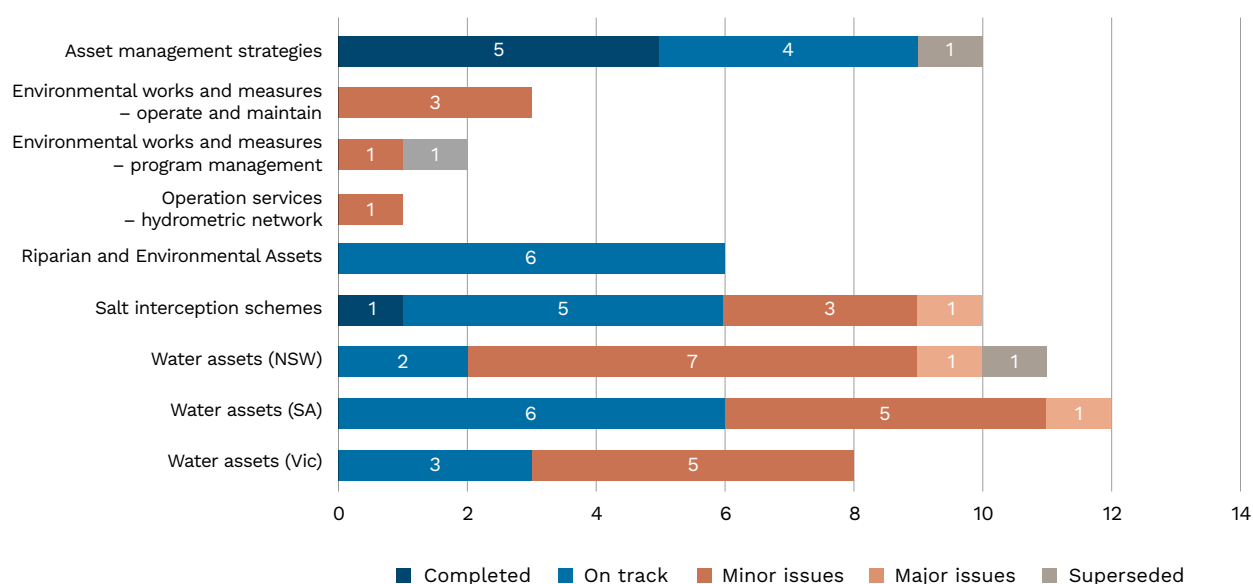
Assessment and reporting happen throughout the year so that any issues can be dealt with.

The 2022–23 target has not been met. While the MDBA coordinated and oversaw the asset activities with most of the asset activities delivered, performance was not endorsed by the River Murray Operations Committee at the scheduled September meeting due to delays caused by flooding.

Of the agreed deliverables for 2022–23, half (50.8%) have been completed or are on track (see Figure 13). Of the remaining 49.2% of deliverables, the majority (39.7%) had minor delays with only 3 deliverables subject to significant delays. Three deliverables were superseded.

Significant effort was required to assess the effects of the floods on the assets and the cost impacts of repairs. This delayed endorsement by the River Murray Operations Committee until their meeting in October 2023.

Figure 13: Performance against agreed 2022–23 Annual Work Plan deliverables for assets program





The MDBA's maintenance and operation of the River Murray system is reviewed by the Independent River Operations Review Group (IRORG)

All assets have been well maintained so they are meeting service level requirements to deliver water allocations and provide navigation and fish passage.

Information sources and information-gathering procedures are well established and efficient and governance arrangements are working smoothly.

To improve future outcomes, MDBA led a major revision of the River Murray Operations Strategic Asset Management Plan in 2022–23, working in conjunction with the state constructing authorities. The revised plan improves line of sight from the corporate objectives to level of service, risk-based prioritisation of work activities and updated asset management strategies. The revised plan is awaiting approval by the Murray–Darling Basin Ministerial Council.

The MDBA also led the preparation of the RMO 2022–23 budget and work plan, working closely with the state constructing authorities to challenge the prudence, efficiency and deliverability of the budget activities. The river management budget was justified through a risk-based prioritisation and deliverability assessment.

Managing dam safety

Measure 4.2 is 'Number of adverse rulings from jurisdictional dam safety regulators'. The 2022–23 target is zero.

About the measure:

The MDBA oversees the River Murray Operations asset program to manage dam safety in accordance with state dam safety legislation or, where that does not exist, the Australian National Committee on Large Dams guidelines.

Where dam safety is not managed in accordance with appropriate dam safety legislation or does not comply with best practice, an adverse ruling will be issued from jurisdictional dam safety regulators.

The 2022–23 target has been met. There were no adverse rulings from dam safety regulators. The MDBA is confident that the safety of the dams is being appropriately managed.

Managing river operations effectively

Measure 4.3 is 'Number of unscheduled major outages of assets'. The 2022–23 target is zero. Unscheduled major outages of assets could impact on the ability to deliver water as required under the agreement and the Basin Plan.

About the measure:

The Independent River Operations Review Group (IRORG) is the advisory committee established under section 203 of the Water Act.

Each year IRORG provides a report based on its review of data from the previous year (due to the lead time involved in collecting and reporting the data) as well as the practice and procedures of the river operations team for the current year.

The policies and processes for operating the river system are well prescribed and do not change from year to year other than to make incremental improvements. In this regard, a positive assessment from IRORG for the previous year can be taken as a general satisfaction with the operating procedures carried forward to the current water year.

IRORG's review process is based on:

- issues documented in the MDBA's annual report River Murray system summary of river operations
- issues raised in interviews and in formal submissions by jurisdictions
- any issues arising from IRORG's own review of available information.

The 2022–23 target has been met, with no major outages reported by IRORG.

Fulfilling efficiency and effectiveness obligations set by the Basin Officials Committee

Measures 4.4 and 4.5 are that the MDBA has fulfilled its efficiency and effectiveness related obligations under the Objectives and Outcomes set by the Basin Officials Committee. As for measure 4.3, these measures are independently assessed by IRORG.

Note that the performance assessments outlined here are lagged measures and focus on the June 2021 to May 2022 water year.

About the measures:

The IRORG considers the MDBA's compliance with the provisions of the Objectives and Outcomes (O&Os) for river operations in the River Murray system. The O&Os are agreed by the Basin Officials Committee under clause 31 of the Murray–Darling Basin Agreement.

The Objectives and Outcomes document [mdba.gov.au/sites/default/files/publications/2023-review-objectives-and-outcomes-of-the-river-murray.pdf] lists 24 outcomes grouped under 5 headings:

- water storage and delivery and accounting
- RMO assets
- people and communities
- environment
- communication and information management.

Measure 4.4 assesses performance against 4 efficiency related outcomes and measure 4.5 assesses performance against 20 effectiveness related outcomes. The methodology is the same, with a quarterly self-assessment of performance against the Objectives and Outcomes as well as a formal check from the Water Liaison Working Group.

The annual independent assessment of MDBA performance is made by IRORG, based on the MDBA's annual River Murray System Summary of River Operations as well as consultation with the Basin states.

The 2022–23 target for each measure has been met. In September 2022, IRORG's report on the 2021–22 water year [mdba.gov.au/sites/default/files/publications/review-of-performance-against-the-objectives-and-outcomes-2021-22.pdf] found that the MDBA had achieved all the efficiency related outcomes in the 2021–22 water year.

Performance on KPI 5: Maintain and improve the health of the River Murray system (and the Basin where relevant) in accordance with the Murray–Darling Basin Agreement and associated agreements

Table 7: Performance against targets for Goal 2, KPI 5

KPI	Measures	2022–23 Target	Result
KPI 5: Maintain and improve the health of the River Murray System (and the Basin where relevant) in accordance with Murray–Darling Basin Agreement and associated agreements	5.1 Maintain or improve the environmental health of the 7 key sites of the River Murray system	70% of report cards show maintained or improved environmental health	Met
	5.2 The Basin salinity target, as identified in schedule B of the Murray–Darling Basin Agreement, is achieved	The average daily salinity at Morgan at a simulated level of less than 800 EC for at least 95% of the time, under the hydrologic conditions of the benchmark period	Met
	5.3 Timely monitoring and reporting on water quality in the River Murray system to aid in decision making	100% monthly reports sent and/or published	Met

KPI 5 measures include the health of key sites of the River Murray system, meeting Basin salinity targets and monitoring and reporting on water quality.

Assessing the environmental health of the Living Murray icon sites

Measure 5.1 is ‘Maintain or improve the environmental health of the 7 key sites of the River Murray system’. The 2022–23 target is 70%, which equates to an outcome of 5 out of 7 icon sites maintaining or improving condition. This recognises that environmental water managers are working within a highly variable natural system.

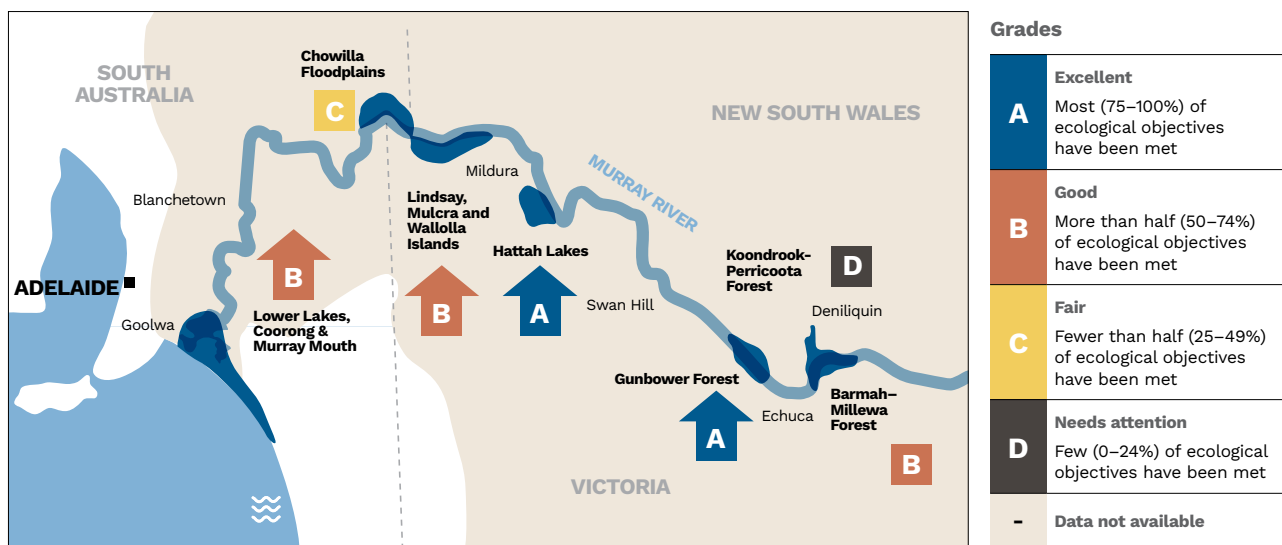
This target is based on monitoring results from 2021–22 since it takes time to evaluate and report on monitoring.

About this measure:

The 7 key sites are the icon sites of the Living Murray program, which is a partnership between the Australian Government and Basin state and territory governments.

The Living Murray program aims to improve the environmental health of significant forests, wetlands and lakes along the River Murray as part of helping to deliver the Basin Plan objectives and outcomes. The initiative is managed by the MDBA.

The icon sites are a collection of locations along the River Murray chosen for their high ecological value and cultural significance to First Nations and regional communities. Each site is regionally and nationally significant and most are recognised internationally under the Ramsar Convention. The Living Murray icon sites are therefore important indicator sites that provide information about the health of the River Murray system.



- Condition grade is based on how well the sites are tracking against ecological objectives for birds, fish and vegetation at each site.
- Shape indicates how condition compares to the previous year. For example, a downward arrow means fewer objectives were met compared to the previous year, and a box shape means condition was maintained.

Figure 14: Icon site report card grades for 2021–2022

Each year the MDBA monitors and reports on the health of the icon sites using a report card system. The report cards are derived from between 80 and 100 monitoring studies.

This allows annual assessment of how healthy each site is through a series of environmental objectives that cover fish, birds, vegetation and other key ecological aspects. Objectives can be met, partially met or not met.

Each site has between 8 and 12 environmental objectives. The percentage of objectives met and partially met is then used to calculate an overall grade for the site.

Measure 5.1 concerns the percentage of report cards with maintained or improved environmental health for 7 key sites. The measure is calculated by comparing the current year's overall grade for a site to the previous year's grade. The health of the site is considered:

- improved, if it moves to a higher grade
- maintained, if an A ('excellent') or B ('good') grade stays the same
- declining, if an A or B grade falls, or if a C ('fair') or D ('needs attention') grade stays the same.

The 2022–23 target has been met. The icon site report cards for 2021–22 are shown at Figure 14. High natural inflows, combined with strategic use of water for the environment, created many positive ecological outcomes across the River Murray system during the reporting period.

Four out of the 7 sites improved in condition, which is among the best environmental health report card results since monitoring began.

Two sites improved from a 'good' rating to an 'excellent' rating and another 2 sites moved from a 'fair' rating to a 'good' rating. One site remained at 'good' condition.

The remaining 2 sites were classified as declining. One site, Chowilla Floodplains, stayed on 'fair' condition and another, Koondrook-Perricoota Forest, needs attention. Koondrook-Perricoota site objectives continue to be difficult to achieve due to ongoing constraints that limit the delivery of water to the forest.

The annual icon site report cards are published on the MDBA website [mdba.gov.au/climate-and-river-health/water-environment/progress-and-outcomes-improving-system].

The Living Murray activities continued in 2022–23, focusing on:

- coordinating, planning and delivering water for the environment
- monitoring and tracking the environmental health of key indicator/icon sites through time
- engagement and partnerships with local community and Traditional Owners.

Working together with regional communities is foundational to the Living Murray activities. This includes over a decade of supporting First Nations participation in water management and planning through the Living Murray Indigenous Partnerships Program.



The BSM2030 strategy's focus is to continue to ensure salinity levels in the shared water resources are appropriate to protect economic, environmental, cultural and social values.

The Basin salinity target is achieved

Measure 5.2 is 'The Basin salinity target, as identified in Schedule B of the Murray–Darling Basin Agreement, is achieved'. The 2022–23 target is 'the average daily salinity at Morgan at a simulated level of less than 800 EC for at least 95% of the time, under the hydrologic conditions of the benchmark period'.

Note that performance against the 2022–23 target is based on 2021–22 modelling results, because it takes time to prepare the salinity registers for the current reporting period. The 2022–23 result will be finalised in November 2023 and reported in the next MDBA annual report.

About the measure:

Basin Salinity Management 2030 Strategy (BSM2030) is a strategy for managing salinity in the Basin, agreed in 2015. This performance measure is the percentage of the BSM2030 salinity targets described in Schedule B of the Murray–Darling Basin Agreement that were achieved. The requirement of the BSM2030 strategy is to achieve the salinity targets on an annual basis.

When the elements of the strategy are implemented, and Murray–Darling Basin Agreement obligations are met, it contributes significantly to maintaining and improving the health of the River Murray system.

The impacts of any works and measures and development activity undertaken by Basin governments on river salinity are assessed using computer models of the river system, recorded in a register and published annually. In this process, the achievement of the Basin salinity target in Schedule B of the Murray–Darling Basin Agreement is assessed, reported annually and reviewed by the Independent Audit Group for Salinity every 2 years.

The Basin salinity target is to maintain the average daily salinity at Morgan at a simulated level of less than 800 electrical conductivity (EC) for at least 95% of the time. This is modelled over the benchmark period (1975–2000) under the current land and water management regime. The benchmark period provides a mechanism for consistently assessing river salinity outcomes over a climatic sequence that includes both wet and dry periods.

The 2022–23 target has been met. 95% of the time, simulated average daily salinity at Morgan in South Australia was 797 EC.

This is the 12th year in a row that the modelled river salinity at Morgan has been below 800 EC for 95% of the time. This is a result of implementing consecutive salinity management strategies by the MDBA and Basin governments since 1988, as shown in Figure 15.

The operation of salt interception schemes contributed to achieving the Morgan salinity target by diverting approximately 281,141 tonnes of salt away from the River Murray and nearby landscapes in 2022–23. This compares with 374,810 tonnes last year.

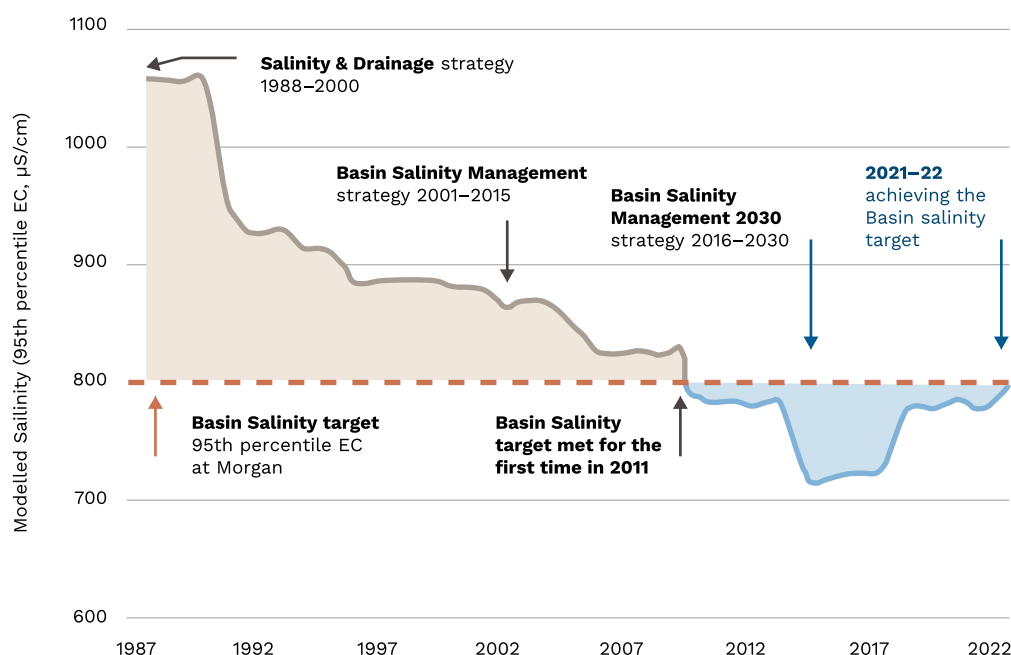


Figure 15: Effect of salinity management programs measured at Morgan in South Australia, 1987–2022

The graph shows modelled 95th percentile salinity over the 1975–2000 benchmark period with the Basin salinity target shown by the dashed orange line. These results do not include salinity benefits from the Basin Plan implementation and the Living Murray initiative.

Reporting on water quality in the River Murray system

Measure 5.3 is ‘Timely monitoring and reporting on water quality in the River Murray system to aid in decision-making’. The 2022–23 target is ‘100% of monthly reports sent and/or published’.

About the measure:

Ongoing tracking of the water quality of the River Murray system is carried out under the River Murray Water Quality Monitoring Program (RMWQMP).

Regular monitoring and reporting provide an indicator of how the health of the River Murray system is being maintained and improved, in accordance with the Murray–Darling Basin Agreement and associated agreements.

The information assists the Water Quality Advisory Panel (WQAP) and the MDBA in their decision-making to maintain or improve water quality. While each state government also publishes water quality information for their jurisdiction, this is the only whole-of-Basin reporting.

The 2022–23 target has been met. A water quality threats map was published each month during the reporting period – and more often as conditions changed – to provide up to date information to the public on any water quality risks.

The water quality threats map is developed by completing a qualitative risk assessment of water quality risks across numerous locations throughout the Basin. This risk assessment relies on a variety of information sources, including (but not limited to) climate and weather outlooks, state partner agencies and data from Murray–Darling Basin water quality monitoring sites.

You can see the map and learn more about managing water quality on the MDBA website [[mdba.gov.au/climate-and-river-health/water-quality/water-quality-threats](https://www.mdba.gov.au/climate-and-river-health/water-quality/water-quality-threats)].

MDBA provided regular updates to the community, river operators and other agencies about ongoing and emerging water quality risks to aid decision-making and communication and to facilitate coordination across the Basin.

Water quality in 2022–23

The 2019–20 Upper Murray bushfires continued to present challenges for sustaining water quality in Lake Hume and immediately downstream in 2022–23. Good water quality was maintained through MDBA coordinated water quality monitoring and Lake Hume releases.

In December 2022 the MDBA facilitated a meeting with key stakeholders and water quality experts to consider water quality risks and management of Lake Hume across the high-risk summer to autumn period. Meeting participants considered options for adaptive management to maintain water quality that had been developed in June 2022. Agreed practices were implemented for Lake Hume operations from January to April 2023.

In 2022–23 the MDBA participated in incident coordination groups led by New South Wales and South Australia to respond to the elevated risk of hypoxic blackwater following widespread flooding. From February 2023, the New South Wales incident coordination group met regularly to consider the risk of hypoxic backwater and flood recession impacts specifically relating to the Menindee Lakes and the lower Darling (Baaka) River.

In addition to regular advice on water quality during the year, updates were provided to guide responses to specific incidents as part of the MDBA's Basin Condition Tracking and Emergency Response Group.

The RMWQMP continued to collect data from state contracting governments (South Australia, Victoria and New South Wales) in the southern Basin. The information is available to researchers, scientists and other relevant users upon request.

Other water quality projects progressed or completed under the RMWQ program in 2022–23 include:

- River Murray Water Quality Monitoring Program Data Trends Analysis 2022 [mdba.gov.au/publications-and-data/publications/river-murray-water-quality-data-trends-analysis-2022] which was prepared by the Centre for Freshwater Ecosystems at La Trobe University
- synthesis of blue-green algae bloom knowledge and trends in the Murray–Darling Basin
- synthesis of blue-green algae seasonal trends and associated impacts to health, recreation and communities within the Murray–Darling Basin.

During the year, the Water Quality Advisory Panel met quarterly and, when required, advice was provided to the River Murray Operations Committee or Basin Officials Committee Alternates.

Looking ahead to 2023–24

After 3 years of above average rainfall and widespread flooding, the Bureau of Meteorology is now predicting drier and warmer conditions for most of Australia under the influence of an El Niño event.

A drier year will be met with full storages for much of the Basin, with the River Murray system well positioned to provide water for communities and the environment.

At the MDBA, our responsibilities for River Murray operations continue. Partnering with Basin governments we will deliver water to all users, while protecting and enhancing the environment.

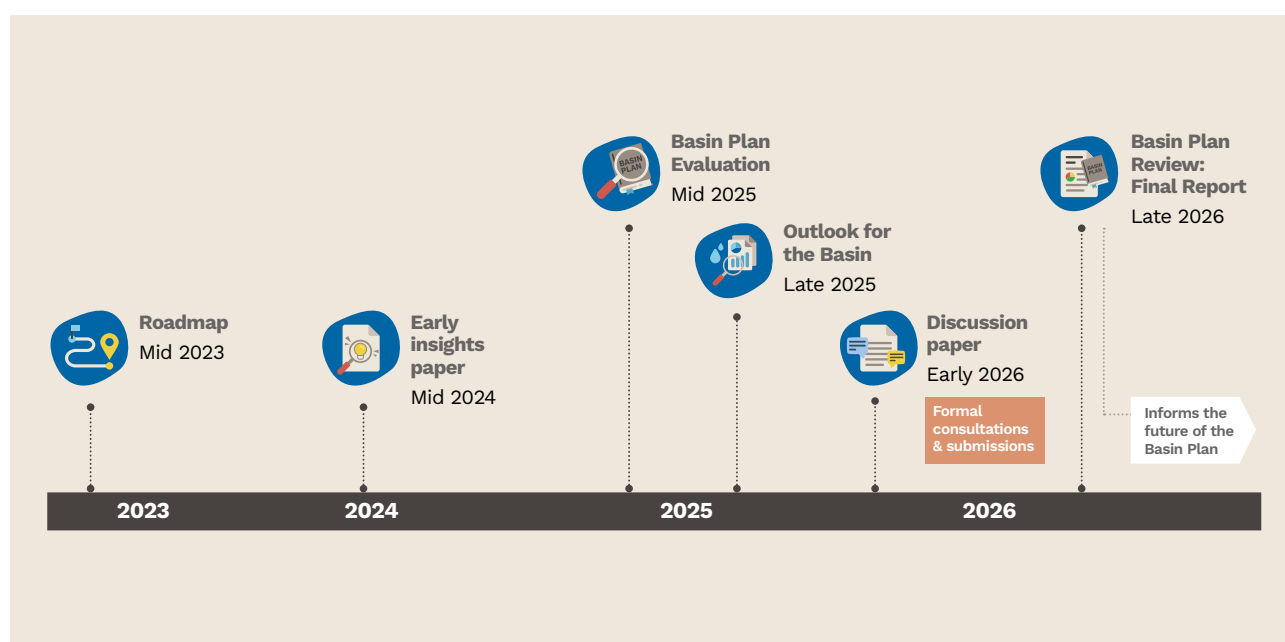
New South Wales water resource plans will be a focus, with work continuing with the NSW Government to deliver legally valid, accreditable plans.

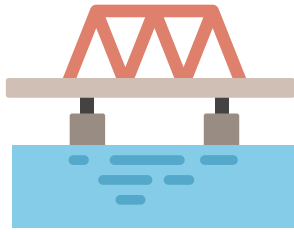
Priority will be given to ongoing implementation of the sustainable diversion limit adjustment mechanism (SDLAM), including assessing progress of Basin state projects, and a reconciliation of these projects in accordance with legislated timeframes.

We will also be making progress along the timeline towards the Basin Plan Review (Figure 16). We are committed to a comprehensive and thorough process to inform the future of the Murray–Darling Basin Plan. The next milestone on the timeline is the early insights paper scheduled for mid-2024, which will inform the work to follow.

At the same time the MDBA will continue to amass knowledge and build an improved understanding that will underpin water policy, operations and decision making in the context of climate change and socio-economic changes.

Figure 16: The timeline for the Basin Plan Review





Our priorities in operating the River Murray are to keep dams and other infrastructure safe, to capture and store water and, where we can, to mitigate any floods for downstream communities.

Major programs of work include:

- **Murray–Darling Water and Environment Research Program** – a 4-year, \$20 million research investment focusing on the themes of climate adaptation, hydrology, environmental outcomes, and social, economic and cultural outcomes.
- **Integrated River Modelling Uplift** – a \$66 million program to modernise and integrate Murray–Darling Basin river models to enable more timely and effective water management decisions.
- **Basin Condition Monitoring Program** – a \$7.5 million Australian Government commitment funded through the Murray–Darling Communities Investment Package and being delivered by the MDBA. The Program is developing and delivering new monitoring and reporting of economic, social and environmental conditions of the Basin.

- **Murray–Darling Basin Sustainable Yields program** – a \$9.8 million commitment to provide a contemporary water resources assessment based on the latest hydrological and global climate change science.
- **Sustainable Rivers Audit** – an \$8 million commitment to provide a trend and current-state condition assessment of the Murray–Darling Basin across the quadruple bottom line relative to Basin Plan objectives and outcomes.

New knowledge from these investments will inform the 2026 Basin Plan Review and will be complemented by engagement with a broad range of stakeholders.

Also this year, the Productivity Commission is expected to finalise its Murray–Darling Basin Plan: Implementation Review 2023 and a final report is expected in December 2023.

You can read more about our priorities for next financial year in the Murray–Darling Basin Authority Corporate Plan 2023–24 [mdba.gov.au/sites/default/files/publications/corporate-plan-2023-2024.pdf].

Case study

Lower Darling (Baaka) fish deaths after flooding

This item contains information some readers may find distressing.

In March 2023 approximately 20 million dead fish were found in the Lower Darling (Baaka) River near Menindee. Very low dissolved oxygen levels, that developed naturally as floodwaters receded back to the river channel, is the suspected cause.

Low dissolved oxygen levels often follow floods, as leaves, grass and other organic material are washed off riverbanks and floodplains into waterways. When combined with warm weather, oxygen levels in the water can drop too low to sustain many forms of life.

The impact of the fish deaths on the local community was devastating, including First Nations peoples who have a cultural connection to native fish species.

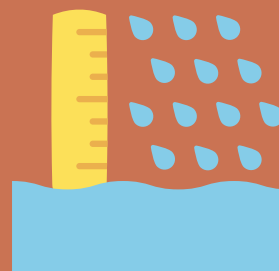
The fish were predominantly bony bream (bony herring), a 'boom and bust' species that makes the most of good conditions with rapid breeding. Numbers had soared across the Basin following widespread flooding over the previous 18 months. In addition to bony bream other species that died included Murray cod, golden perch, silver perch and European carp.

Greater releases of higher quality water from Lake Pamamaroo were made in late February to try to improve the water, but with ongoing low dissolved oxygen levels and hot conditions in mid-March dead fish were sighted floating in the lower Darling (Baaka) from the Menindee Main Weir to approximately 20 km downstream.

New South Wales government set up a multi-agency incident response team to respond to the emergency, assisted by MDBA staff. There was significant interest from the media.

The incident is currently being investigated by the New South Wales Chief Scientist. The MDBA welcomes any future management recommendations that might arise from it.

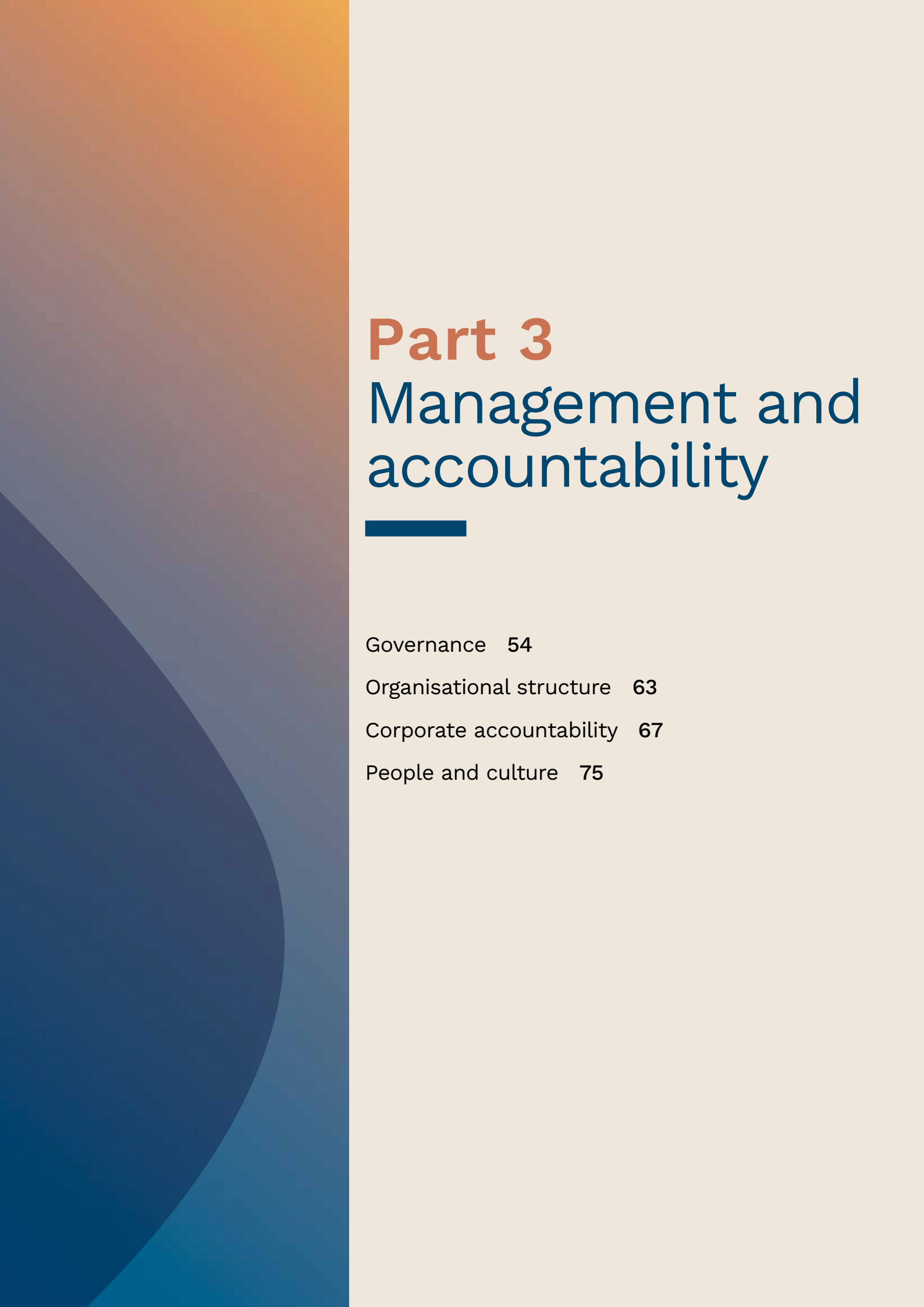
We are working with Basin state governments, First Nations and the wider community to support native fish populations across the Basin. You can read The Native Fish Recovery Strategy on the MDBA website [mdba.gov.au/publications-and-data/publications/native-fish-recovery-strategy].



Low levels of oxygen were revealed through routine monitoring earlier in the summer but options to improve conditions were limited, given the enormous volume of water in the river.



03



Part 3

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Governance

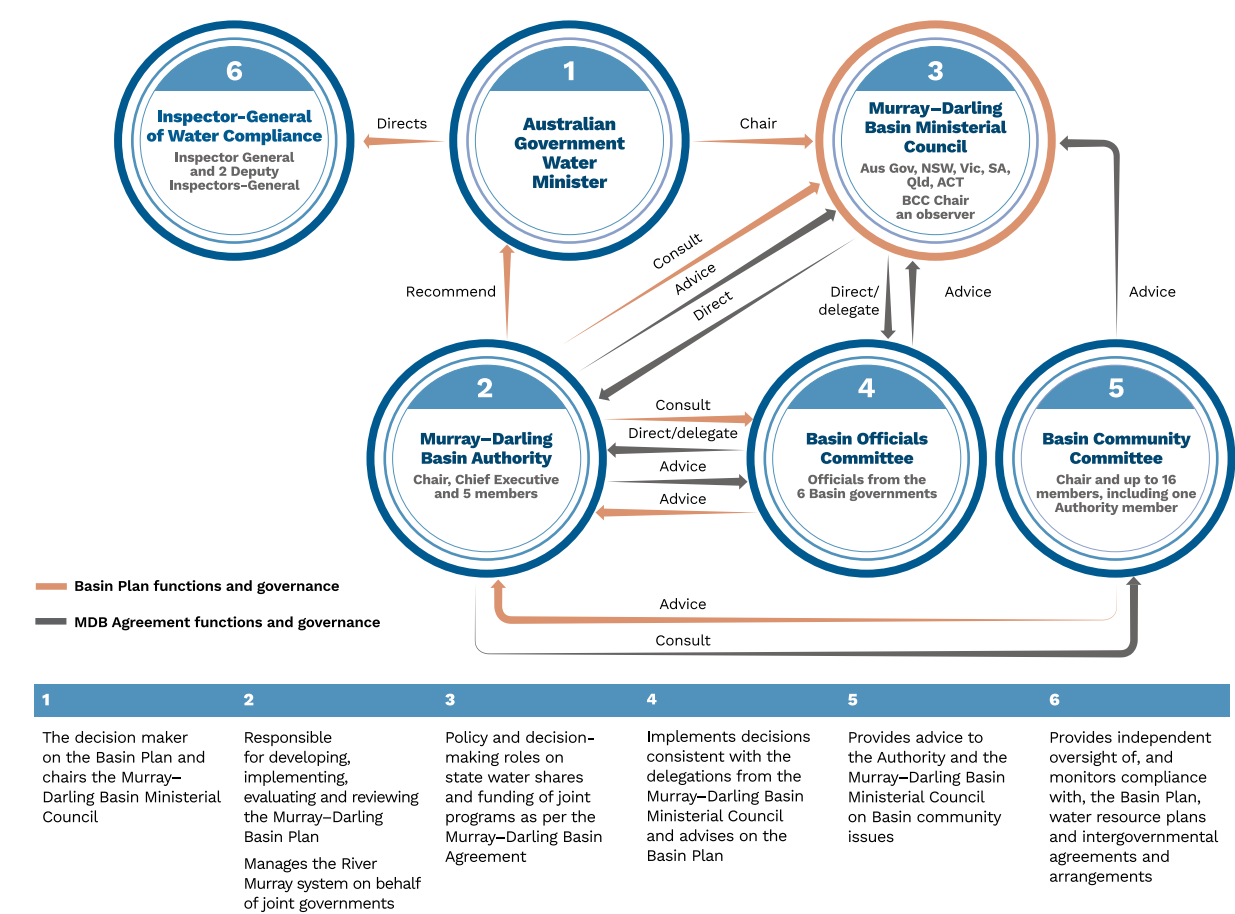
The Murray–Darling Basin Authority (the 7-member Authority) is established under the *Water Act 2007* (Cth) (the *Water Act*). The Authority is supported by the Murray–Darling Basin Authority (the MDBA), an independent Australian Government agency.

Water in the Basin is managed in a cooperative arrangement between the Australian Government and the governments of the Basin states – New South Wales, Queensland, South Australia, Victoria and the Australian Capital Territory.

The *Water Act*, Basin Plan and Murray–Darling Basin Agreement provide the framework to ensure that water is shared between all users in a sustainable way.

The governance model reflects this through the various councils and committees that support the Australian Government water minister in their decision-making role (see Figure 17).

Figure 17: MDBA governance arrangements and core functions



Note: A new broader Ministerial Council has been established to consider multi-jurisdictional water resource policy and other water-related matters including Murray–Darling Basin matters. The Water and Murray–Darling Basin Ministerial Council reports to National Cabinet. The Murray–Darling Basin Ministerial Council will meet alongside the new Ministerial Council and continue to operate and function as outlined in the Murray–Darling Basin Agreement and the *Water Act 2007*.

Australian Government water minister

The Murray–Darling Basin Authority reports to the Hon Tanya Plibersek, Australian Government Minister for the Environment and Water, who was appointed to office on 1 June 2022. The water minister also chairs the Murray–Darling Ministerial Council and, in accordance with the Water Act, can direct the Authority on how it performs its functions.

The Authority

The Authority is made up of a part-time Chair, a full-time Chief Executive, and 5 part-time members, including an Indigenous member (See Figure 18).

Authority members are appointed based on their specialised skills and experience in areas relevant to water resource management, governance, environmental, community and Indigenous matters.

The appointment process is set out in the Water Act and the 2008 Intergovernmental Agreement on Murray–Darling Basin Reform and is managed by the department, which was the Department of Climate Change, Energy, the Environment and Water during the reporting period.



Figure 18: Members of the Murray–Darling Basin Authority at Authority meeting in Narrabri on Kamilaroi country, June 2023 (L to R: Stuart Bunn, Susan Madden, Sir Angus Houston, Andrew McConville, Roseanne Healy, Rene Woods, Jane Doolan)

The Authority collaborates with, and takes advice from, the Australian Government department with responsibility for water, the Commonwealth Environmental Water Holder (CEWH) and Basin jurisdictions. It receives advice from:

- advisory committees established under the Water Act, including the Advisory Committee on Social, Economic and Environmental Science (ACSEES) and the Basin Community Committee (BCC)
- the MDBA on Basin-wide strategy, policy and planning.

The Authority also receives advice from Basin communities, industry, environmental groups and other government agencies (including the Bureau of Meteorology and the Australian Competition and Consumer Commission). Regular briefings from these groups ensure the Authority's decision making is robust and well informed.

At 30 June 2023 Authority members are:

- Air Chief Marshal Sir Angus Houston AK, AFC (Ret'd) – Chair
- Professor Stuart Bunn – member
- Dr Jane Doolan – member
- Ms Roseanne Healy – member
- Ms Susan Madden – member
- Mr Rene Woods – Indigenous member
- Mr Andrew McConville – Chief Executive.

Authority members



Air Chief Marshal Sir Angus Houston AK, AFC (Ret'd) is Chancellor of the University of the Sunshine Coast and chairs many boards including the Authority. He was awarded the Knight of the Order of Australia in 2015 for extraordinary and pre-eminent achievement and merit in service to Australia. Sir Angus served for 41 years in the Australian Defence Force including holding the positions of Chief of the Australian Defence Force from 2005 to 2011 and Chief of the Air Force. He was appointed chair of the MDBA in August 2020.



Professor Stuart Bunn is the Director of the Australian Rivers Institute at Griffith University, Brisbane. His major research interests are in the ecology of river and wetland systems which has resulted in more than 250 technical publications. Stuart has extensive experience working with international and Australian government agencies on water resource management issues. He was appointed to the Authority in May 2018.



Dr Jane Doolan is a Director of Southern Rural Water Corporation in Victoria, a founding member of the Water Policy Group, an Adjunct Professor at the University of Canberra and chairs several consultative and advisory committees. Her career encompasses intergovernmental policy development and negotiations, particularly in relation to the management of the Murray–Darling Basin. In March 2022, she completed a term as the Environment Commissioner with the Australian Productivity Commission. Jane was appointed to the Authority in May 2022.



Ms Roseanne Healy is a managing director at Enterprise Corporation Pty Ltd and a board member of the Grains Research and Development Corporation. She is chair of Cashflow Manager Pty Ltd and Dairysafe, and a non-executive director of Dairy Australia, Airborne Research Australia and GP Partners. Ms Healy has over 20 years' experience in corporate management across the agriculture, food and wine, technology and infrastructure sectors. Roseanne was appointed to the Authority in December 2021.



Ms Susan Madden is a Principal Economist with international consulting firm GHD in the Natural Resources and Agriculture team. She has also worked in both public and private sector roles, including experience with the NSW Catchment Management Authorities, agricultural consulting firm Hassall and Associates, and accounting firm KPMG. Susan is Chair of the Central West Local Land Services and sits on the Local Land Services Board of Chairs. She is a Fellow of the Peter Cullen Trust. Susan was appointed to the Authority in March 2016.



Mr Rene Woods is a Nari Nari man from Hay in south-west NSW. He has had a long involvement in Gayini (water) for Aboriginal people across the Basin and extensive experience in the management of Aboriginal Culture, heritage and natural resources. Rene is a Conservation Officer with Nature Conservancy Australia and has previously been Chair of the Murray Lower Darling Rivers Indigenous Nations and Vice-Chair of the Nari Tribal Council. Rene was appointed to the Authority in December 2020.



Mr Andrew McConville joined the MDBA in June 2022 as Chief Executive. Prior to this, Mr McConville was Chief Executive of the Australian Petroleum Production and Exploration Association. Andrew also spent over a decade with world leading agribusiness Syngenta. Earlier in his career, he ran his own agribusiness public relations consultancy and worked as Head of Corporate Affairs for Business at the National Australia Bank.

You can find out more about the Authority and read Communiqués published after each meeting on the MDBA website [mdba.gov.au/about-us/who-we-are/authority].

Murray–Darling Basin Ministerial Council

The Murray–Darling Basin Authority is accountable to the Murray–Darling Basin Ministerial Council for matters under the Murray–Darling Basin Agreement. The Murray–Darling Basin Ministerial Council develops and coordinates policy for the effective planning and sustainable use of the water, land and other environmental resources of the Basin.

It can give directions to the Basin Officials Committee on its functions and powers, and it may seek the advice of the Basin Community Committee on these functions.

The Ministerial Council is made up of the Australian Government minister responsible for water and the ministers responsible for water from each Basin jurisdiction. As of 30 June 2023, members were:

- Australian Government – the Hon Tanya Plibersek MP
- New South Wales – the Hon Rose Jackson MP
- South Australia – the Hon Dr Susan Close MP
- Queensland – the Hon Glenn Butcher MP
- Victoria – the Hon Harriet Shing MP
- Australian Capital Territory – Mr Shane Rattenbury MLA.

You can read more about the Murray–Darling Basin Ministerial Council on the MDBA website [mdba.gov.au/about-us/governance-and-committees/murray-darling-basin-ministerial-council].

Basin Officials Committee

The Basin Officials Committee (BOC) is established under Part IV of the Murray–Darling Basin Agreement. It is the peak body of Basin government officials providing advice to decision-makers on all Murray–Darling Basin matters.

The BOC facilitates cooperation and coordination between the Australian Government, the Basin states and the MDBA in funding works and managing water and other natural resources. It is responsible for implementing the policy decisions of the Murray–Darling Basin Ministerial Council on matters including state water shares.

The BOC consists of a senior official from each Basin jurisdiction. It is chaired by the Australian Government member. The MDBA Chief Executive is an advisor to the BOC and, along with the Authority Chair, can attend and participate in BOC meetings but does not have a vote in meeting decisions.

As of 30 June 2023 the 6 members were:

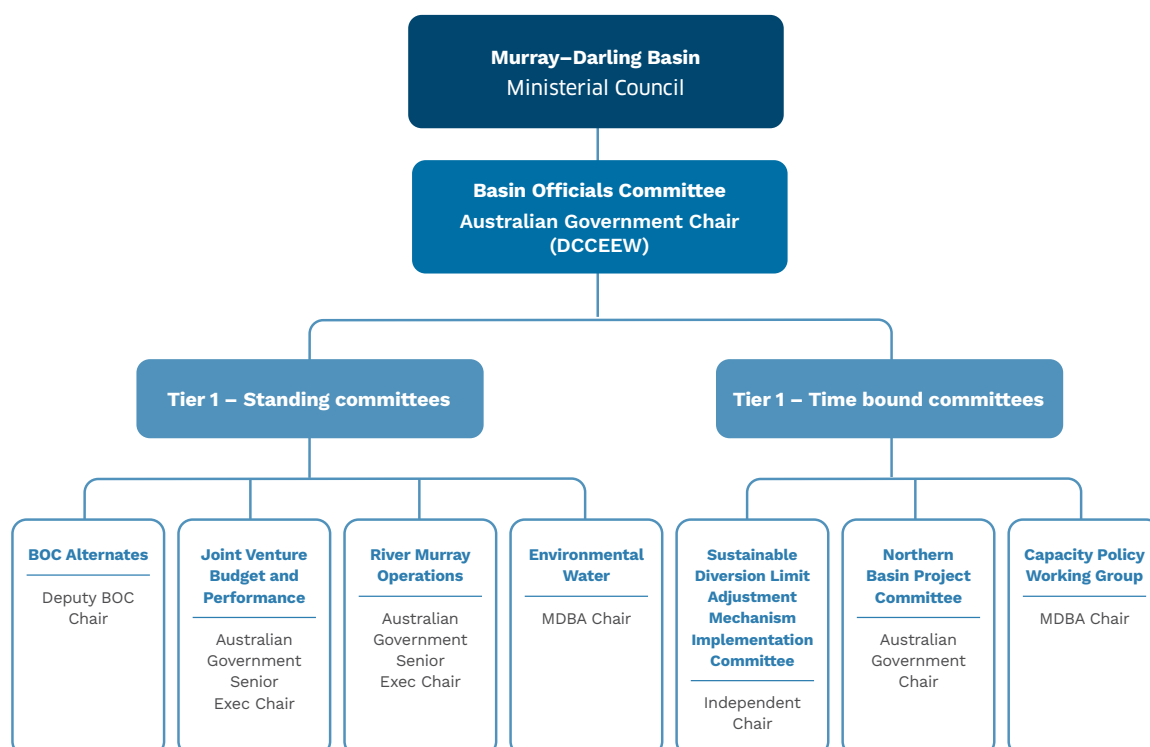
- Australian Government – Lyn O’Connell (Chair)
- New South Wales – Mitchell Isaacs
- Victoria – Helen Vaughan
- South Australia – Ben Bruce

- Queensland – Jarrod Cowley-Grimmond
- Australian Capital Territory – Geoffrey Rutledge.

There are 4 standing committees and 3 time-bound committees that report to BOC as shown in Figure 19.

You can find out more about the Basin Officials Committee on the MDBA website [mdba.gov.au/about-us/governance-and-committees/basin-officials-committee].

Figure 19: Structure of the Basin Officials Committee



Basin Community Committee

The Basin Community Committee (BCC) was established under the Water Act to provide a community perspective on a wide range of water resource, environmental, cultural and socioeconomic matters in the Basin.

It provides advice to the Authority and the Murray–Darling Basin Ministerial Council and engages with the Basin Officials Committee, the department and Authority advisory committees.

Members come from all over the Basin (see Figure 20), and each has expertise and interest in water use, water management, Indigenous and local government matters. BCC members are key local contacts for the Authority.

The 4th cohort of the BCC commenced on 1 February 2022. There are currently 15 members including 4 First Nations members. The next cohort is due to commence in early 2024.

On 30 June 2023 members of the BCC and their locations were:

- Phil Duncan (outgoing Chair) – Gwydir
- Rachel Kelly (incoming Chair) – mid-Murray and Murrumbidgee
- Sam Coulton – Border Rivers
- Andrew Drysdale – Condamine
- Edward Fessey – Culgoa–Barwon–Darling
- Mike Gilby – Sunraysia
- Warren Jacobs – Lower Murray
- Susan Madden (Authority member) – Dubbo
- Neil Martinson – Riverland
- Feli McHughes – Barwon–Darling
- Samantha O’Toole – Lower Balonne
- Sue Rudd – Sunraysia
- Emelia Sudholz – Wimmera
- Adrian Weston – Goulburn–Broken
- Alice Williams – Macquarie–Castlereagh.

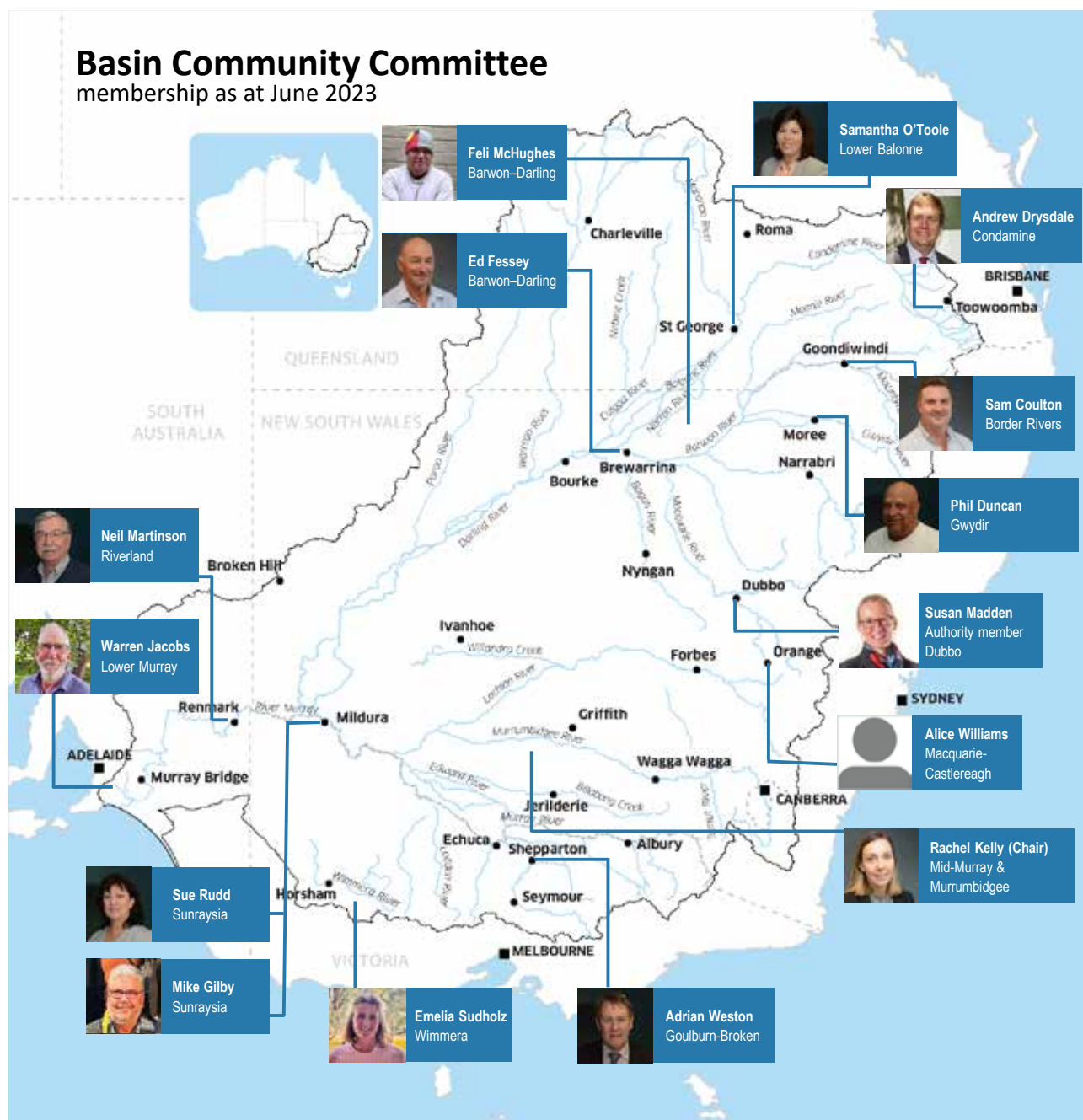
You can read more about the Basin Community Committee on the MDBA website [mdba.gov.au/about-us/governance-and-committees/basin-community-committee].

Advisory committees

Under section 203 of the Water Act, the MDBA can establish advisory committees to assist it in performing its functions. We have 6 committees, each of which focuses on specific matters:

- Advisory Committee on Social, Economic and Environmental Sciences
- Independent River Operations Review Group
- River Murray Asset Advisory Panel
- Salt Interception Technical Working Group
- Advisory Group Hume–Yarrawonga Waterway Management
- Basin Plan Evaluation Advisory Committee.

Figure 20: Basin Community Committee members





ACSEES and IRORG are 2 of the advisory committees that support our work.

Advisory Committee on Social, Economic and Environmental Sciences

The Advisory Committee on Social, Economic and Environmental Sciences (ACSEES) is an important source of independent, strategic advice to the MDBA.

ACSEES reviews and advises on the science that informs Basin Plan implementation and the broader scientific context of the MDBA's work, including adaptation to future climates, environmental management and the monitoring and evaluation of Basin health and Basin Plan outcomes.

The committee's work helps to ensure the Basin Plan can be confidently implemented with the support of robust science and knowledge.

Fostering partnerships and the communication of Basin science within academic, community and industry networks are also important components of the committee's role.

ACSEES members have high standing in the areas of hydrology, ecology and natural resource management, climate sciences, economics, social and cultural values, and water governance and law.

ACSEES formally meets twice per year, with additional out-of-session engagement arranged as needed. Authority member Professor Stuart Bunn currently attends the formal ACSEES meetings as an observer. Following the resignation of Chair Professor Rob Vertessy in late 2022, the process of appointing a new chair is underway. Associate Professor Rebecca Nelson is the Acting Chair.

You can read more about ACSEES on the MDBA website [mdba.gov.au/about-us/governance-and-committees/advisory-committee-social-economic-and-environmental-sciences]

Independent River Operations Review Group

The Independent River Operations Review Group (IRORG), established under the Water Act, reviews the MDBA's performance in river operations and water sharing activities.

This includes reviewing the outcomes of the MDBA's environmental water delivery actions, operation of the River Murray increased flows, operation of South Australia's storage right and the MDBA's compliance with the river operations objectives and outcomes set by the Basin Officials Committee.

The IRORG assesses MDBA performance and compliance with objectives and outcomes at the end of each water year (1 June–31 May).

Following the retirement of member Dr Terry Hillman, the process of appointing a new member is in progress.

You can read more about IRORG on the MDBA website [mdba.gov.au/about-us/governance-and-committees/independent-river-operations-review-group].

Organisational structure

At 30 June the MDBA had 4 portfolio areas, led by the Chief Executive. See the organisation chart at Figure 21. The head of each portfolio sits on the Executive Board.

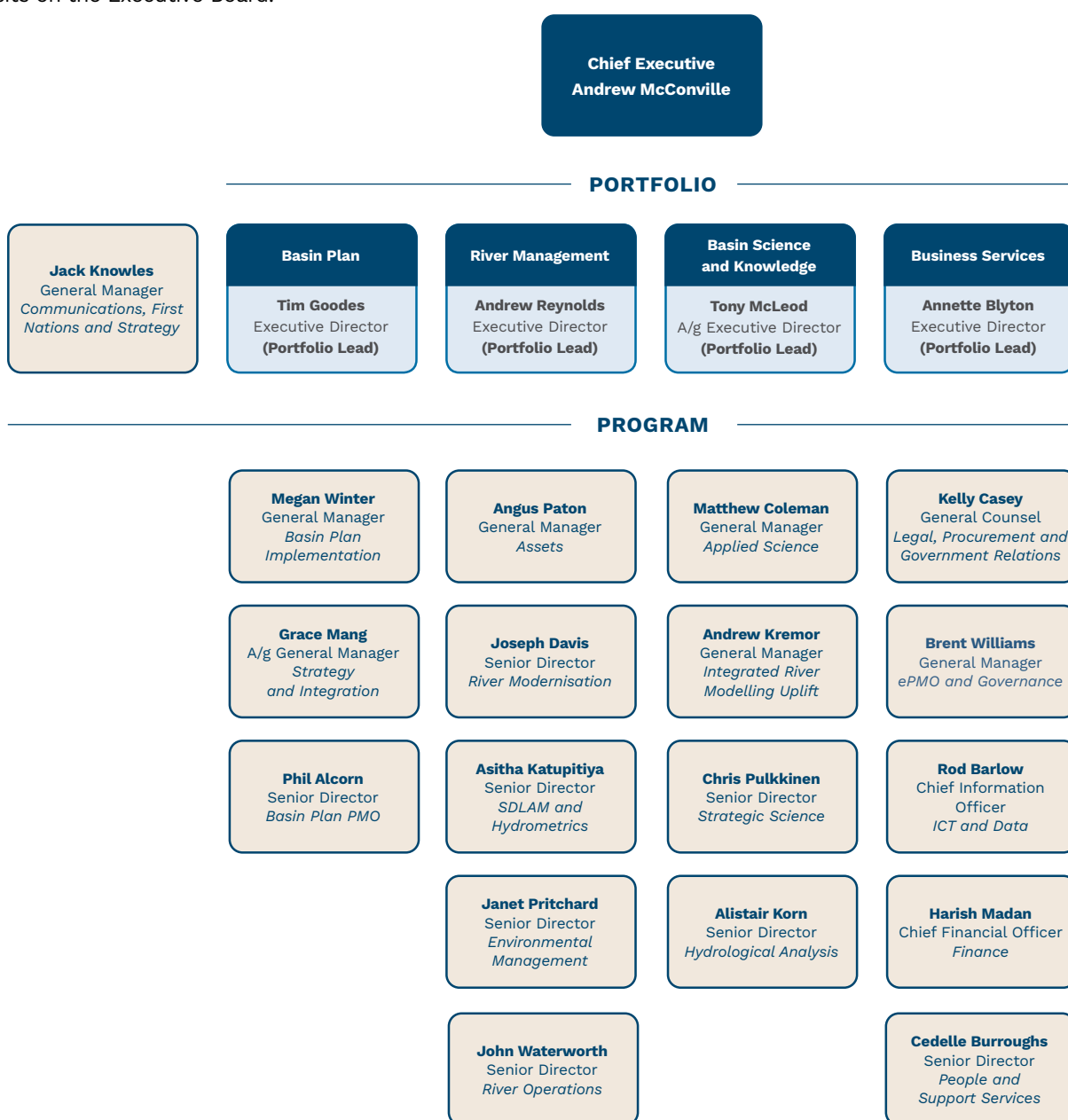


Figure 21: MDBA organisational structure at 30 June 2023

The portfolios are:

- **Basin Plan** – focuses on Basin Plan policy, implementation, review, water accounting and the assessment of water resource plans. It includes the environmental monitoring and evaluation aspects of the Basin Plan.
- **River Management** – works with state partners to lead the integration and delivery of environmental and operational water needs and manage river operations.
- **Basin Science and Knowledge** – ensures best practice science is linked directly to Basin Plan policy.
- **Business Services** – runs the business of the MDBA in areas including financial management, people and culture, parliamentary and secretarial services, and data and information management.

The General Manager, Communications, First Nations and Strategy also reports directly to the Chief Executive. This area focuses on the MDBA's external relationships including engagement, First Nations relationships, communications, media and strategic policy.

MDBA Executive Board

The Executive Board approves the MDBA's strategic direction and risk mitigation strategies for projects and programs for all investments.



Andrew McConville
Chief Executive

Andrew was appointed to the MDBA as Chief Executive on 19 June 2022. Before that, he spent 3 years as Chief Executive Officer of the Australian Petroleum Production and Exploration Association, and more than 10 years in senior corporate and communications positions with global agribusiness company Syngenta.

With a background in resource economics and financial management, Andrew has management experience across a range of domestic and international organisations and industries. He has considerable experience in developing strategic partnerships and building engagement with communities, governments and other stakeholders.

Andrew has a Bachelor of Economics (Agriculture) (Hons) from the University of New England, a Master of Science (Agricultural Economics) from the University of Oxford, and he has completed INSEAD's Finance for Executives course in Singapore. He is a member of the Australian Institute of Company Directors and the Public Relations Institute of Australia.



Tim Goodes
Executive Director, Basin Plan

Tim joined the MDBA leadership team on 15 June 2020. Before commencing in this role, Tim was the Deputy Chief Executive of the Department of Primary Industries and Regions in South Australia. He was responsible for agriculture, food and wine, regional development, major program delivery and corporate services.

From 2009 to 2017 Tim was the Deputy Chief Executive of the Department of Environment, Water and Natural Resources in South Australia. In that role, he was responsible for the policy and strategy development of the department, including serving as the Basin Official for South Australia, overseeing the implementation of the Basin Plan and other major water projects.

Tim came to natural resources management after 12 years in the Justice portfolio, in Courts and the Attorney-General's Department. This included time as the Sheriff of South Australia and 3 years as an executive director in the Department of the Premier and Cabinet.

Tim has a Bachelor of Social Administration and a Master of Public Policy and Administration.



Andrew Reynolds
**Executive Director,
River Management**

Andrew joined the MDBA leadership team in 2013 and was acting Chief Executive between January and June 2022. He has more than 28 years of experience in the water industry, managing major water supply infrastructure.

Before joining the MDBA, Andrew held various roles with Goulburn–Murray Water. His work there included managing the headworks business responsible for 16 large dams and associated infrastructure, delivering several major dam safety upgrades, and leading the business's engineering and scientific resources.

Andrew has a Bachelor of Engineering (Agricultural) (Hons) from the University of Melbourne. He is the current chairman of the Australian National Committee on Large Dams.



Annette Blyton
**Executive Director,
Business Services**

Annette joined the MDBA leadership team in 2017. She has worked in a broad range of corporate areas since starting her public service career in 1986. These areas include corporate and business management, farm surveys, data, social research, finance, property and major projects and procurements.

From 2002 to 2012, Annette was Corporate Manager for the Australian Bureau of Agriculture and Resource Economics and Sciences. She then joined the Office of the Commonwealth Director of Public Prosecutions, where she worked as National Manager, People from 2012 to 2015. Annette moved to the Department of Agriculture and Water Resources in 2015, where she was responsible for the department's national property interests and a range of other national business functions.



Tony McLeod
Acting Executive Director,
Basin Science and Knowledge

Prior to joining the MDBA in 2008, Dr Tony McLeod was involved in the development of the *Water Act 2007* (Cth) with the then Department of the Environment and Water Resources. From 1998 to 2006 he worked for the Murray–Darling Basin Commission including on the Living Murray, river operations and on the cap on diversions. He has also worked with the New South Wales Government. In 1993 Tony completed a PhD in water resource management at the University of Melbourne.

In 2014 he spent 4 months based at the Getches-Wilkinson Centre for Natural Resources, Energy and the Environment at the University of Colorado Boulder on a Fulbright Fellowship. There he researched water management issues in the western United States with particular reference to the comparisons with the Murray–Darling Basin.

MDBA senior management boards and committees

The Executive Board is supported by boards and committees that advise on specific areas (see Figure 22).

Program Board

The Program Board takes strategic direction from the Executive Board. It oversees the planning and implementation of approved MDBA programs and projects. The Program Board has taken over the work of the former Information Management and Technology Committee.

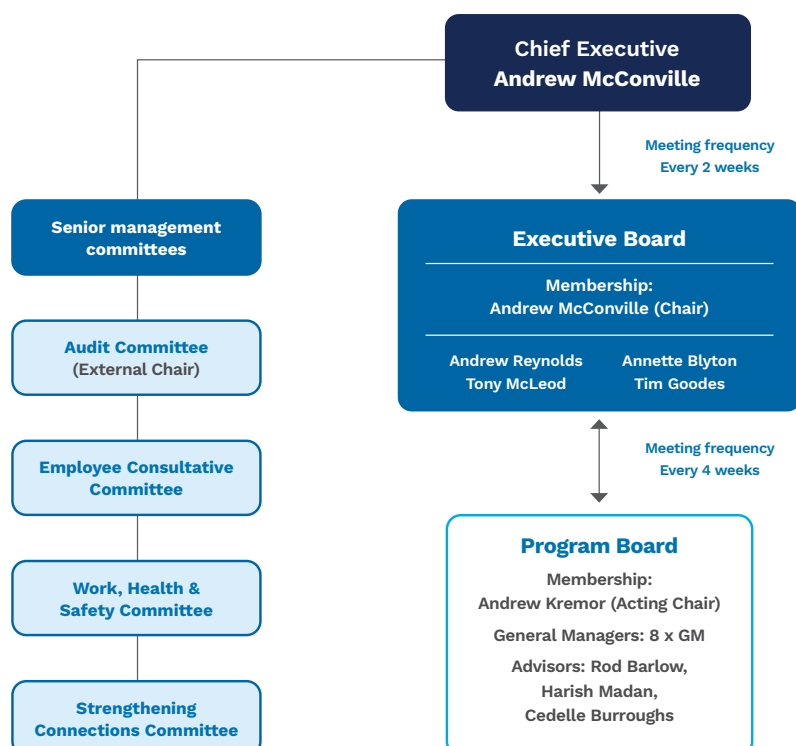
The Board's role is to oversee the implementation of approved portfolios, programs and projects. It regularly takes advice about external issues from the strategic policy group.

Senior management committees

There are 4 senior management committees:

- Audit Committee
- Employee Consultative Committee
- Health and Safety Committee
- Strengthening Connections Committee

Figure 22: MDBA's Executive Board and associated boards and committees



Corporate accountability

Corporate governance practices

As a corporate Commonwealth entity, the MDBA has established practices that enable us to meet objectives while managing risk and using resources in an accountable way.

The MDBA corporate plan is our key planning document. It sets out how the MDBA will achieve its purpose through goals that have measurable targets. We report performance against those targets each year in the annual report. A performance framework helps individual staff and teams manage performance and contribute to organisational goals.

The MDBA's planning, performance and reporting framework is supported by policies and guidelines and, where appropriate, external review.

The MDBA's ability to achieve its goals and respond to change relies on building organisational capability. This is done through having strong values, good leadership, a dynamic and flexible workforce, and processes and systems that are regularly reviewed and improved.

The MDBA has identified the need for a strong regional presence and decentralised workforce as a priority. Other strategies include:

- looking for ways to streamline governance arrangements, such as using shared services
- building knowledge management and capability through improving systems and practices
- building a digitally capable workforce
- enhancing financial and non-financial performance measurement
- improving transparency through clear communication, partnerships and engagement.

Risk management

Risk management framework and policy

The MDBA's approach is set out in the MDBA Risk Management Framework and Policy, which is consistent with the Commonwealth Risk Management Policy and ISO 31000:2018.

The framework sets out our risk appetite and tolerance for each major function. It establishes where the agency is more tolerant of risk, such as where taking a risk presents opportunities for innovation, improvement and building capability and capacity. It also sets out where the agency has a low tolerance, such as fraud, work health and safety and compliance risks.

Identifying risks that would compromise our ability to deliver our objectives is a key part of our risk management approach.

We analyse the sources of risk against the MDBA's risk impact categories. This allows risks to be monitored and reviewed as well as controlled and treated in accordance with the framework.

This comprehensive approach allows us to make informed decisions about allocating resources for risk management. It also fosters a positive risk culture at all levels of the agency, by providing a clear line of sight between the day-to-day work activities and managing risks in order to meet the objectives of the agency.

The MDBA has appropriate financial controls in place and these operated effectively and reliably during the 2022–23 year. There is a sound internal control framework in place, and a reliable financial management reporting system.

All new MDBA workers and contractors complete the MDBA training that includes integrity in the APS, fraud awareness, risk awareness and privacy. New staff members are required to address conflicts of interest and are made aware of the need to keep sensitive water market information confidential.

In 2022–23, the MDBA commenced a review of its approach to risk, which will be further progressed with the review of its Risk Management Framework in 2023–24.

Comcover

Comcover provides the MDBA's insurance cover. Insurable risks are identified and assessed annually through Comcover's insurance renewal process. The MDBA is separately insured by Comcare for workers compensation for employees.

Comcover conducted a benchmarking survey during the reporting period, in accordance with a 2-yearly schedule. The Risk Management Benchmarking Program is a key part of Comcover's risk management services through the Comcover risk maturity model.

The 5 areas of focus for the risk maturity model are:

- risk governance
- risk culture
- risk capability
- risk management framework and practices
- organisational resilience and agility.

The MDBA performed well against each of the areas of focus. Our strongest capability is in:

- risk management framework and practices
- organisational resilience and agility.

Fraud control

As a matter of best practice, the MDBA's fraud control arrangements align with the Commonwealth Fraud Control Framework. This framework establishes systems and processes for preventing, detecting, monitoring, evaluating, reporting and responding to fraud. In 2022–23, there were no findings of fraud.

The MDBA regularly reviews its fraud prevention and control measures, which include fraud risk assessment and the fraud control plan.

Business continuity and ICT disaster recovery plans

The MDBA has 4 main documents that outline arrangements for recovering from a business disruption or emergency:

- MDBA Business Continuity Plan
- MDBA Business Impact Analysis
- River Murray System Emergency Action Plan
- ICT Disaster Recovery Plan.

One of these, the River Murray System Emergency Action Plan, was subject to a desktop review in 2022–23. The review found the document fit for purpose in the short term, with a more complete review of the plan being undertaken in 2024.

All other documents are currently being reviewed and business continuity will be tested in 2023–24.

Internal audit

Internal audit services were provided by an external provider in 2022–23. Internal audits were developed in consultation with senior management and their teams, having regard to the MDBA Enterprise Risk Management Plan and the MDBA Assurance Strategy.

The internal audit reports finalised during the year were:

- Sustainable Diversion Limit Adjustment Mechanism (SDLAM) Reconciliation Project Assurance Review
- Follow up of Agreed Audit Recommendations Review
- Managing the Provision of Scientific Subject Matter Expertise
- Corporate Performance Reporting – Annual Performance Statement
- Cloud Governance Review
- Financial Management Information Systems System Enhancement and Key Controls Review.

The audit reports did not raise any major matters. The implementation of internal audit report recommendations is monitored by the Chief Operating Officer and the Audit Committee.

Compliance reporting

It is a requirement of the *Public Governance, Performance and Accountability Act 2013* (Cth) (PGPA Act) that the MDBA reports significant non-compliance with finance law. Finance law includes:

- the PGPA Act
- the *Public Governance, Performance and Accountability Rule 2014* (Cth) (PGPA Rule)
- instruments made under the PGPA Act (including Accountable Authority Instructions) and Appropriation Acts.

The compliance reporting process helps to identify and disclose instances of non-compliance with the PGPA framework, as a basis for continuous improvement.

There were no significant reportable breaches of the PGPA Act, the PGPA Rule or Australian Government policies in 2022–23.

Audit committee

The MDBA's governance framework includes the Audit Committee, which provides independent advice and assurance. In keeping with section 17(2) of the PGPA Rule, the Audit Committee reviews and gives advice on our:

- financial reporting
- performance reporting
- system of risk oversight and management
- system of internal control.

Audit Committee members, their attendance at meetings and remuneration are shown in Table 8.

You can read the Audit Committee Charter and our other governance policies on the MDBA website [mdba.gov.au/about-us/accountability-and-reporting/policies-and-governance].

Table 8: Audit Committee members, attendance at meetings and remuneration

Member name	Qualifications, knowledge, skills or experience	No. of meetings attended/ total no. of meetings	Total annual remuneration (GST inc.)	Additional information
Karen Hogan Chair Independent member	Karen has been an Independent member of the MDBA Audit Committee for 12 years and Chair since January 2022. Karen has been an Independent member of several audit committees in various Australian Government agencies. Karen has extensive leadership experience in accounting, finance, corporate governance, risk, procurement, information technology and human resources. This experience encompasses both the public and private sectors and has been gained in such diverse areas as cultural institutions, regulation, manufacturing, energy, farming, tourism and fast-moving consumer products. Karen's areas of interest are improving financial literacy, the exploitation of technology and improving corporate governance in an efficient and effective manner.	5/5	\$23,100	
Stephen Sheehan Deputy Chair Independent member	Stephen has 40 years of financial management experience. He has a Bachelor of Commerce degree. He was previously an Australian Public Service senior executive and held the positions of Chief Financial Officer at the Commonwealth Department of Immigration and Citizenship and the Department of Health and Ageing.	5/5	\$19,690	Mr Sheehan also chairs the Financial Statements Sub-Committee of the MDBA Audit Committee
Andrew Cox Independent member	Andrew is a corporate governance professional with extensive experience in governance, audit and risk management. He works for the Institute of Internal Auditors–Australia as internal audit subject matter expert. He has managed internal audit functions over his career including senior executive roles as National Manager of Internal Audit at Centrelink and Director of Risk Management Services for the Northern Territory Government, a whole-of-government internal audit bureau service. He has made presentations on governance and assurance in Australia and internationally and has taught internal auditing in Australia and other countries. He has authored numerous publications, white papers and fact sheets for the IIA–Australia. He is an independent chair and member of a number of audit committees.	4/5	\$13,068	

Member name	Qualifications, knowledge, skills or experience	No. of meetings attended/ total no. of meetings	Total annual remuneration (GST inc.)	Additional information
Michael Parkinson Independent member	<p>Michael Parkinson has more than 40 years experience in internal auditing and risk management. His experience is predominantly in government and covers all 3 levels. He has also provided technical advice and support in other countries within the Asia-Pacific region.</p> <p>Michael served for 8 years on the Standards Australia/ Standards New Zealand joint technical committee on risk management standards. He also served on the committee that developed the international standard on Compliance Management Systems.</p> <p>Michael continues to serve on a number of audit committees and provides quality reviews and advice to internal audit and to risk management functions.</p>	5/5	\$13,068	

External scrutiny

The reporting requirements for corporate Commonwealth entities require the MDBA to report on significant developments in external scrutiny that occurred during the reporting period. This includes judicial decisions or decisions by administrative tribunals that have had or may have a significant effect on the MDBA's operations.

Judicial or administrative tribunal decisions

There were no judicial decisions or decisions of administrative tribunals to report during 2022–23.

Auditor-General reports

The MDBA's financial statements are audited by the Auditor-General. The Australian National Audit Office made no formal reports relating to the MDBA during 2022–23.

Parliamentary committee reports

There were no parliamentary committee reports to report during 2022–23.

Commonwealth Ombudsman reports

There were no reports by the Commonwealth Ombudsman to report during 2022–23.

Office of the Australian Information Commissioner reports

There were no reports by the Office of the Australian Information Commissioner during 2022–23.

Capability reviews

There were no capability reviews to report during 2022–23.

Freedom of information

Agencies subject to the *Freedom of Information Act 1982* (Cth) are required to publish information under the Information Publication Scheme (IPS). The MDBA maintains a disclosure log and complies with the obligation to publish a range of information on its website as part of the IPS.

Information on our approach to the IPS is on the MDBA website [[mdba.gov.au/about-us/accountability-and-reporting/requesting-our-information/information-publications-scheme](https://www.mdba.gov.au/about-us/accountability-and-reporting/requesting-our-information/information-publications-scheme)].

Ministerial directions and government policy orders

Under the PGPA Rule, the MDBA is required to report on any ministerial directions which are given under an Act or instrument.

The MDBA did not receive any new ministerial directions during 2022–23. The MDBA continues to comply with the *Water (Indigenous Values and Uses) Direction 2018* (Cth).

Under the PGPA Act the MDBA must report on any government policy orders that applied to it during the reporting period. The MDBA was not subject to any government policy orders during 2022–23.

Advertising and market research

Under section 17AH of the PGPA Rule, the MDBA must report on any advertising and market research undertaken during the financial year above the threshold set out in section 311A of the *Commonwealth Electoral Act 1918* (Cth).

During the reporting period, the MDBA did not have any advertising, polling or direct mail expenses that met the threshold of more than \$14,500.

Ecological sustainability and environmental performance

Ecological sustainability is at the core of MDBA activities, as specified in the Water Act. The MDBA is required to report on its environmental performance under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Ecological sustainability

There are 5 principles of ecological sustainable development:

- **the integration principle** – decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations
- **the precautionary principle** – if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation

- **the intergenerational principle** – the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations
- **the biodiversity principle** – the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making
- **the valuation principle** – improved valuation, pricing and incentive mechanisms should be promoted.

The MDBA meets and advances the 5 principles of ecological sustainable development through key MDBA activities such as:

- delivering the Basin Plan
- developing annual environmental watering priorities
- maintaining and improving the health of the River Murray system – and Basin where relevant – in accordance with the Murray–Darling Basin Agreement and associated agreements
- directing river operations in the River Murray in accordance with the objectives and outcomes set by the Basin Officials Committee.

Environmental performance

The MDBA takes a proactive approach to minimising the impacts we have on the environment.

In 2022–23 we continued to mitigate the agency’s impacts by saving energy, minimising waste, saving water and reducing travel emissions, as shown in Table 9.

Table 9: MDBA’s sustainability activities

Theme	MDBA initiatives to minimise environmental impact
Saving energy	<ul style="list-style-type: none"> Energy efficiency is a factor in procurement decisions when whitegoods and ICT equipment are purchased. LED lighting with movement sensors installed throughout MDBA offices. Centralised multi-function devices are provided instead of less efficient desktop printers. All hot water in kitchens are heated by instant systems. The MDBA Canberra office achieved a 5.5 star NABERS Energy Tenancy rating. Cooling and heating HVAC systems are set to energy-saving temperatures. Regional offices (where applicable) achieved ‘good’ to ‘market leading’ ratings (NABERS Energy Tenancy ratings): <ul style="list-style-type: none"> Goondiwindi – 6 Mildura – 5 Griffith – 4 Murray Bridge – 4. <p>Note: Wodonga and Adelaide offices are situated within shared office spaces.</p> <ul style="list-style-type: none"> Staff are strongly encouraged to turn off: <ul style="list-style-type: none"> lights to rooms when not in use computer monitors overnight.
Minimising waste	<ul style="list-style-type: none"> Paper and toner use minimised through ‘double-sided’ and ‘black and white’ printing options as system defaults. Printing is minimised by enabling ‘swipe-to-print’ so staff print only the documents they need. We publish in electronic format only, wherever possible. Recycling of organic waste, batteries, organic plastic bottle tops and coffee pods in addition to standard waste recycling at MDBA offices. Our Griffith, Mildura and Murray Bridge offices achieved NABERS Waste Management ratings of between 2 and 5 stars, with recycling carried out to the capability of regional councils. Toilet tissue is made from renewable resources, and manufactured under environmental management systems that support responsible forestry stewardship.
Saving water	<ul style="list-style-type: none"> We are working with building managers of applicable MDBA offices to install: <ul style="list-style-type: none"> water-efficient toilets low-flow shower heads sensor-operated taps in bathrooms low flow taps in kitchen areas.
Reducing travel emissions	<ul style="list-style-type: none"> We have provided all staff with access to video conferencing software that facilitates online meetings wherever possible. We discourage non-essential travel. We encourage cycling to work for Canberra-based staff by providing a secured bike storage area and lockers, toilets and showers.

APS Net Zero by 2030

As part of the reporting requirements under section 516A of the *Environment Protection and Biodiversity Conservation Act 1999*, and in line with the Australian Government's APS Net Zero 2030 policy, the MDBA is required to report on the greenhouse gas emissions from our operations.

We have estimated our emissions in accordance with the Whole-of-Australian Government approach in Tables 10 and 11 below. Note that electricity consumption data for offices located in Adelaide, Wodonga and Toowoomba was not available, since these sites lack a National Meter Identifier.

Table 11 sets out greenhouse gas emissions when applying the market-based method, which accounts for activities such as Greenpower, any large-scale generation certificates purchased and being located in the ACT.

Table 10: Greenhouse gas emissions, carbon dioxide equivalent, location-based method, 2022–2023

Emission source	Scope 1 kg CO ₂ -e	Scope 2 kg CO ₂ -e	Scope 3 kg CO ₂ -e	Total kg CO ₂ -e
Electricity (Location Based method)	N/A	139,260	12,988	152,248
Natural Gas	-	N/A	-	-
Fleet Vehicles	16,902	N/A	4,153	21,055
Domestic Flights	N/A	N/A	204,181	204,181
Other Energy	-	N/A	-	-
Total kg CO₂-e	16,902	139,260	221,322	377,484

Table 11: Greenhouse gas emissions, carbon dioxide equivalent, market-based method, 2022–2023

Emission source	Scope 1 kg CO ₂ -e	Scope 2 kg CO ₂ -e	Scope 3 kg CO ₂ -e	Total kg CO ₂ -e
Electricity (Market Based method)	N/A	55,004	7,280	62,284
Natural Gas	-	N/A	-	-
Fleet Vehicles	16,902	N/A	4,153	21,055
Domestic Flights	N/A	N/A	204,181	204,181
Other Energy	-	N/A	-	-
Total kg CO₂-e	16,902	55,004	215,614	287,520

People and culture

Over the reporting period, the MDBA continued to implement a number of initiatives under our People Strategy 2021–2026 (Figure 23). In 2022–23, activities focused on 2 pillars: Supporting Health and Wellbeing and Delivering our Workforce Strategy.

Our workforce is key to delivering MDBA's purpose and vision. This year we developed the MDBA Enterprise Workforce Plan 2023–2027 to build a capable and flexible staff. It will guide us over the next 4 years to ensure we have the right people with the right skills in the right places and that they can apply their skills and capabilities to best effect.

Figure 23: The 5 strategic pillars of the MDBA's People Strategy 2021–2026



Looking ahead, the MDBA needs to work in an increasingly connected way with other agencies and organisations to share data, modernise systems and approaches to running the river, and respond to the effects of environmental change on river management and preservation.

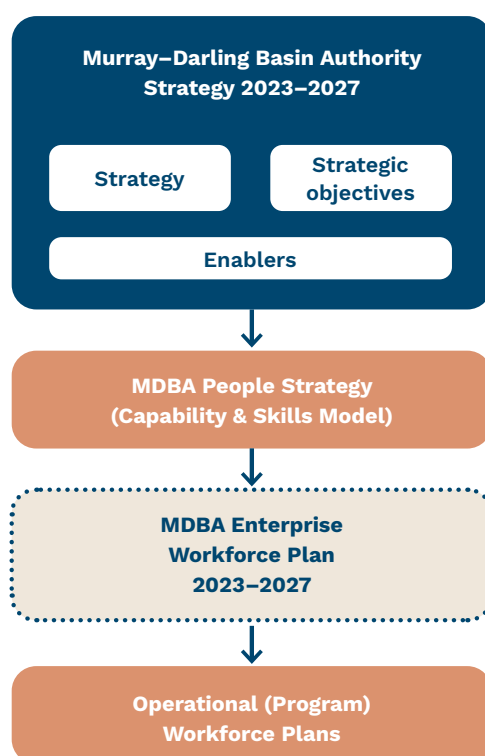
This will require an adaptive workforce that has a combination of:

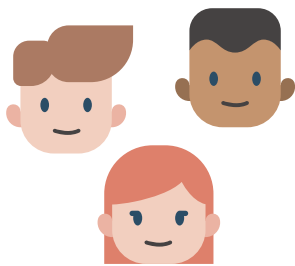
- technical skills, such as hydrology and policy development
- operational and core skills, such as project management, communication and engagement
- in-depth MDBA contextual knowledge and expertise.

As figure 24 shows, development of our workforce plan involved defining future requirements that could then be compared with the current workforce profile. Gaps were identified which we categorised under the themes of Capability and Skills, Capacity and Composition to demonstrate their impact on the workforce.

To put the Workforce Plan into practice, program-level operational workforce plans will be developed.

Figure 24: Development of the MDBA Enterprise Workforce Plan 2023–2027





Each year, our staff members are required to complete a self-paced training module that reminds them of the requirements and responsibilities of working in the APS.

Ethical standards

The MDBA is committed to effective and transparent governance. We rely on public confidence in the integrity of the agency to deliver our activities and functions. As an Australian Government agency these values are underpinned by the Australian Public Service values: committed to service, ethical, respectful, accountable and impartial.

Standards and behaviours are set out in the APS Code of Conduct in section 13 of the *Public Service Act 1999*.

The MDBA supplements this with policies that support ethical standards including:

- procedures for determining APS Code of Conduct breaches
- MDBA Declaration of Interest Policy 2022–2024
- conflict of interest guidance for Authority members
- MDBA policy for managing Sensitive Water Market Information 2022–2024
- fraud control plan and policy.

Work health and safety

MDBA is committed to health and safety at work.

Work health and safety initiatives delivered in 2022–23 included:

- regular workplace inspections and risk assessments monitored by the Health and Safety Committee
- review of the work health and safety risks across the agency
- promotion of R U OK? Day
- early intervention services to prevent and mitigate chronic injuries or illnesses developing
- implementation of a Mental Health and Wellbeing Strategy
- annual flu vaccination program
- workstation assessment (including home-based) by qualified occupational therapists

- rehabilitation support
- confidential support services for employees and eligible family members through the Employee Assistance Program
- an annual health and wellbeing allowance
- activities for the annual health and wellbeing week
- wellbeing series presented by the Employee Assistance Program.

There were 11 reported work health and safety incidents in 2022–23. No new claims were approved. (see Tables 12 and 13).

Table 12: MDBA health and safety statistics, 2016–17 to 2022–23

	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
Internal reports on workplace hazards and incidents	7	23	12	7	1	2	11
Lost time caused by incidents and injuries not reported to Comcare (staff days)	58	14.5	2.5	0	0	0	14
Lost time caused by incidents and injuries reported to Comcare (staff days)	0	3	0	0	0	0	0
Incidents reported to Comcare	0	0	1	0	0	0	0

Table 13: MDBA Comcare claims and premiums, 2016–17 to 2022–23

	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
Number of new claims	0	1	0	0	0	1	0
Total cost of new claims (\$)	0	2,552	0	0	0	7,334	0
Average cost of new claims (\$)	0	2,552	0	0	0	7,334	0
Comcare premium (\$)	1,040,669	1,026,752	357,142	116,181	87,435	75,860	95,830

Health and Safety Committee

The Health and Safety Committee assists the MDBA's Executive to ensure health and safety for MDBA employees at work. This includes assisting with developing policies and procedures and coordinating activities for special events including the annual health and wellbeing week.

The committee meets 4 times each year.

Membership comprises:

- Chair – General Counsel
- Deputy Chair – Director, People and Culture
- Management representative
- Health and Safety representatives – Canberra
- Health and Safety representatives – regional offices.

Employee arrangements

On 30 June 2023, the MDBA had 329 staff: 291 ongoing and 38 non-ongoing (see Tables 14 and 15).

Staff are employed under the Murray–Darling Basin Authority Enterprise Agreement 2017–2020. The terms of this agreement will continue to apply until 10 July 2023 or until it is replaced by a new enterprise agreement under the provisions of the *Fair Work Act 2009* (Cth).

In line with the Public Service Interim Arrangements, MDBA staff will receive a 3% pay increase on 11 July 2023.

Employee Consultative Committee

The Employee Consultative Committee is established under Clause 11 of the MDBA Enterprise Agreement 2017–2020 to facilitate communication, consultation and cooperation with employees on matters affecting the workplace and the operation of the Enterprise Agreement.

The ECC provides a forum for involving staff in the decision-making for changes to existing policies, guidelines or procedures, and the development of new ones, as well as providing advice to the Chief Executive on matters relating to the Enterprise Agreement.

The Committee members are:

- the Chief Executive (chair)
- management representatives
- portfolio representatives
- regional representatives
- employee representatives from the relevant unions.

Table 14: MDBA ongoing employees, 2022–23

	Man/Male			Woman/Female			Non-binary			Prefers not to answer			Uses a different term			Total
	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	
NSW	4	1	5	10	2	12	-	-	-	-	-	-	-	-	-	17
Qld	2	-	2	4	2	6	-	-	-	-	-	-	-	-	-	8
SA	20	1	21	17	3	20	1	-	1	-	-	-	-	-	-	42
Tas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vic	17	1	18	17	2	19	-	-	-	-	-	-	-	-	-	37
WA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACT	89	4	93	80	14	94	-	-	-	-	-	-	-	-	-	187
NT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
External Territories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Overseas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	132	7	139	128	23	151	1	-	1	-	-	-	-	-	-	291

Table 15: MDBA non-ongoing employees, 2022–23

	Man/Male			Woman/Female			Non-binary			Prefers not to answer			Uses a different term			Total
	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	
NSW	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Qld	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	1
SA	2	1	3	4	2	6	-	-	-	-	-	-	-	-	-	9
Tas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vic	6	-	6	2	-	2	-	-	-	-	-	-	-	-	-	8
WA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACT	7	1	8	7	4	11	-	-	-	-	-	-	-	-	-	19
NT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
External Territories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Overseas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	16	2	18	14	6	20	-	-	-	-	-	-	-	-	-	38

Table 16: MDBA ongoing employees, previous reporting period (2021–22)

	Male			Female			Indeterminate			Total
	Full time	Part time	Total Male	Full time	Part time	Total Female	Full time	Part time	Total Indeterminate	
NSW	4	2	6	8	0	8	0	0	0	14
QLD	4	0	4	4	2	6	0	0	0	10
SA	13	0	13	10	3	13	1	0	1	27
VIC	14	1	15	10	1	11	0	0	0	26
WA	0	0	0	1	0	1	0	0	0	1
ACT	87	4	91	66	24	90	0	0	0	181
Total	122	7	129	99	30	129	1	0	1	259

Table 17: MDBA non-ongoing employees, previous reporting period (2021–22)

	Male			Female			Indeterminate			Total
	Full time	Part time	Total Male	Full time	Part time	Total Female	Full time	Part time	Total Indeterminate	
NSW	2	0	2	2	0	2	0	0	0	4
QLD	0	0	0	1	0	1	0	0	0	1
SA	2	0	2	3	0	3	0	0	0	5
VIC	3	0	3	0	1	1	0	0	0	4
WA	0	0	0	0	0	0	0	0	0	0
ACT	4	0	4	1	1	2	0	0	0	6
Total	11	0	11	7	2	9	0	0	0	20

Executive remuneration

The MDBA Authority members, the Chair, Chief Executive and part-time office holders have their remuneration determined by the Remuneration Tribunal.

The Chief Executive determines the remuneration for the MDBA's Senior Executive Service officers under section 24(1) of the *Public Service Act 1999* (Cth). Remuneration for key management personnel, senior executives and other highly paid staff in 2022–23 are at Tables 18 to 20.

Table 18: Remuneration for key management personnel, 2022-23

Name	Position title	Short-term benefits			Post-employment benefits	Other long-term benefits	Termination benefits	Total remuneration
		Base salary¹ \$	Bonuses \$	Other benefits and allowances \$				
Sir. Angus Houston	Authority Chair	122,538	-	-	10,238	-	-	132,867
Prof. Stuart Bunn	Authority Member	73,527	-	-	6,248	-	-	79,775
Susan Madden	Authority Member	73,527	-	-	6,248	-	-	79,775
Rene Woods	Authority Member	73,527	-	-	6,248	-	-	79,775
Roseanne Healy	Authority Member	73,527	-	-	6,248	-	-	79,775
Dr Jane Doolan	Authority Member	73,527	-	-	9,939	-	-	83,466
Andrew McConville	Chief Executive	467,282	-	-	25,890	12,859	-	506,032
William Goodes	Executive Director	315,384	-	-	40,908	20,002	-	376,294
Annette Blyton	Executive Director	290,647	-	6,143	47,937	70,331	-	415,058
Andrew Reynolds	Executive Director	314,430	-	6,143	36,399	45,851	-	402,825
Gregory Manning	Executive Director	193,583	-	6,143	33,823	1,523	-	232,027

Table 19: Remuneration for senior executives, 2022–23


Total remuneration bands	Number of senior executive staff	Short-term benefits				Post-employment benefits	Other long-term benefits	Termination benefits	Total remuneration
		Average base salary ¹	Average bonuses	Average other benefits and allowances ²	Average long service leave				
		\$	\$	\$	\$				
\$220,00 or less	1	98,350	-	-	18,612	17,751	-	-	134,713
\$220,001 - \$245,000	1	195,745	-	-	13,065	22,909	-	-	231,719
\$245,001 - \$270,000	1	214,397	-	6,143	10,108	28,712	-	-	259,360
\$270,001 - \$295,000	4	237,362	-	358	13,281	36,892	-	-	287,893
\$295,001 - \$320,000	3	249,185	-	2,048	14,498	38,279	-	-	304,010

Table 20: Remuneration for other highly paid staff, 2022–23

Total remuneration bands	Number of other highly paid staff	Short-term benefits				Post-employment benefits	Other long-term benefits	Termination benefits	Total remuneration
		Average base salary ¹	Average bonuses	Average other benefits and allowances ²	Average long service leave				
		\$	\$	\$	\$				
\$220,001 - \$245,000	1	191,527	-	8,431	14,756	30,156	-	-	244,870
\$245,001 - \$270,000	1	185,162	-	8,431	20,842	37,687	-	-	252,122

¹ Base salary includes the current reporting period's annual leave accrual and excludes the leave paid in the current reporting period.

² Other benefits and allowances is the provision of carpark and associated Fringe Benefits Tax (where applicable).



Part 4

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Financial performance

For 2022–23 the MDBA reported a surplus of \$1.6 million (2021–22: \$29.7 million) attributable to the Australian Government. This was a variance of \$45.8 million to the original budget deficit of \$46 million due to:

- expenditure on the Integrated River-Modelling Uplift project was lower than originally anticipated due to a delay in the commencement of the project
- expenditure on the Murray–Darling Basin Agreement functions was lower than anticipated due to the environmental conditions during the year
- lower than anticipated expenditure across new measures announced during the financial year.

A significant portion of this will be carried over into the 2023–24 financial year to complete projects in progress.

Underspend in the Murray–Darling Basin Agreement functions was primarily related to the budget allocated to the state construction authorities. Several factors contributed towards this underspend including but not limited to procurement delays, flooding conditions during the 2022–23 financial year and supply-chain issues.

Revenue

For 2022–23 financial year the MDBA revenue comprised:

- **Australian Government revenue** totalling \$53.2 million (2021–22: \$80.8 million). This includes revenue for Basin Plan related activities and South Australian Floodplains Integrated Infrastructure Program (SARFIIP). The current financial year revenue was lower because the final payment for SARFIIP was received in 2021–22 financial year (\$29.9 million) with no further revenue received for SARFIIP in the 2022–23 financial year. Current financial year revenue also includes revenue received for additional measures announced in the October 2022 budget.
- **Contributions from jurisdictions** of \$101.7 million (2021–22: \$101.5 million). This is consistent with the prior financial year. Revenue from jurisdictions was higher in the 2021–22 and 2022–23 financial years when compared to prior years, due to larger Joint Programs planned expenditure, including additional expenditure for the Hume Dam irrigation outlet project.

In addition to this, jurisdictions have an option to off-set their annual contributions using previously accumulated underspends. In the 2021–22 and 2022–23 financial years, jurisdictions used a smaller portion of their accumulated underspends when compared to prior years.

- **Other revenue** of \$22.4 million (2021–22: \$16.9 million). The increase in other revenue was primarily driven by increased interest revenue from higher interest rates during the financial year.

Figure 25 shows MDBA revenue trends over the past 5 years.

Expenditure

The MDBA total expenditure for 2022–23 was \$175.6 million (2021–22: \$169.5 million). The increase from the last reporting period was primarily driven by the commencement of the Integrated River Modelling Uplift project which began this year. The MDBA also had a higher average staffing level across the year.

Figure 26 shows revenue received, expenditure incurred and the available funds over the last 5 years. On transition from the Murray–Darling Basin Commission to the MDBA during 2008, the available funds were \$441.5 million.

A significant component of these funds has been applied to River Murray Operations key construction projects, including the Environmental Works and Measures Program; and the MDBA share in the acquisition of water entitlements for the Living Murray program, which resulted in declining cash reserves.

Figure 25: MDBA revenue trends, 2018–19 to 2022–23

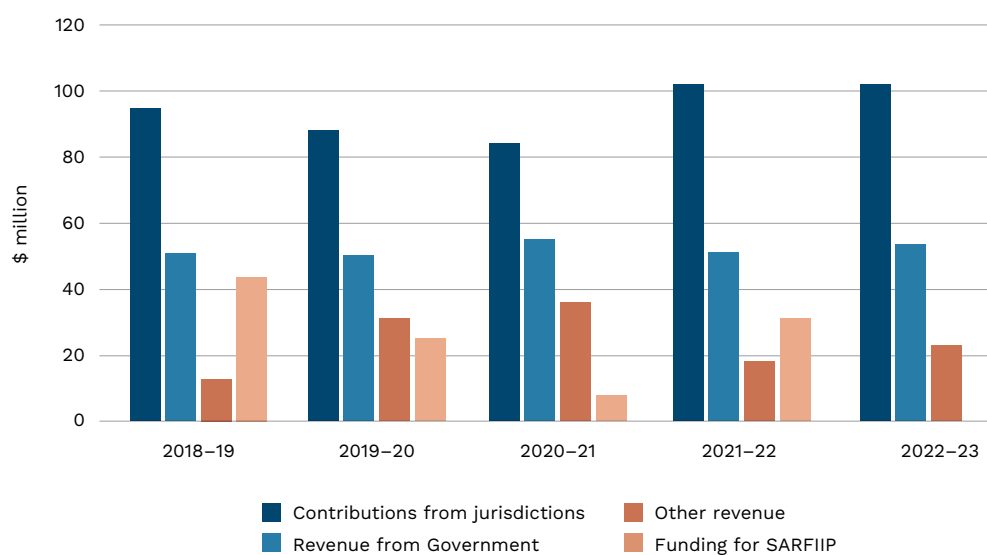
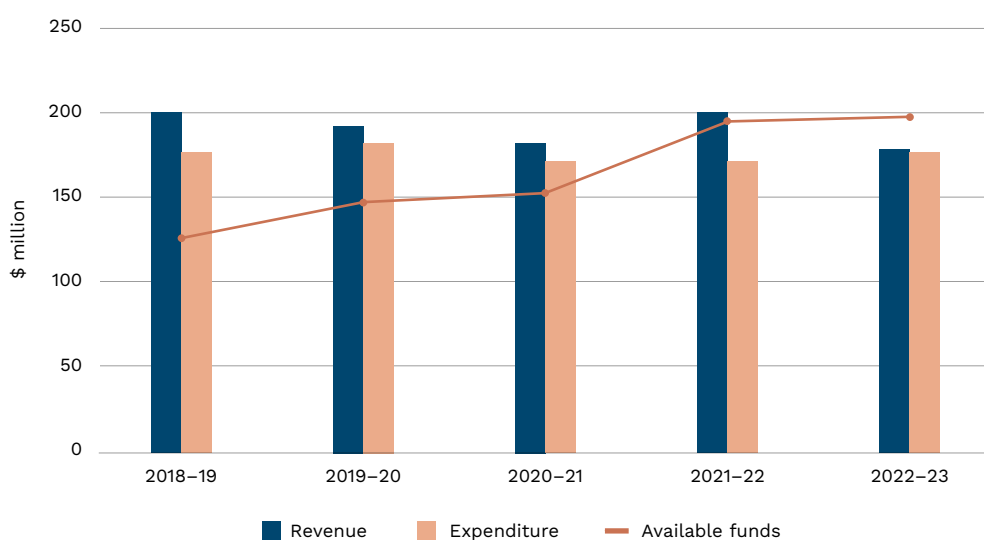


Figure 26: MDBA revenue, expenditure and special account, 2018–19 to 2022–23



These reserves have now started to increase again due to the recent surpluses in the joint program activities from lower than anticipated expenditure on capital infrastructure projects, delays in the completion of the SARFIIP project and delays in the delivery of new measures.

The balance held in the special account includes accumulated underspends of the joint program activities; various Memoranda of Understanding (MOUs) such as the Hydrometric Network and Remote Sensing project and the Water and Environment Research Program. Cash balance relating to these activities is not available to the MDBA to fund its broader priorities.

The cash balance at year-end also represents the short-term working capital requirements of the MDBA, and available funding to complete key Australian Government funded projects.

The MDBA operating bank account is a special account under section 209 of the *Water Act 2007* (Cth) (the Water Act). The account is not a Special Account for the purposes of the *Public Governance, Performance and Accountability Act 2013* (the PGPA Act).

The Water Act specifies that all amounts received by the MDBA in connection with the performance of its functions under the Water Act must be credited to this special account. The bank account opening balance on 1 July 2022 was \$187.4 million. This increased to \$195.3 million at the year-end because of the 2022–23 financial year operations.

Managing our assets

At the end of 2022–23 total assets were at \$234.3 million (2021–2022: \$224.8 million). When the Murray–Darling Basin Commission transitioned to the Murray–Darling Basin Authority in December 2008, a significant amount of the assets were transferred to the River Murray Operations (RMO) and Living Murray initiative (LMI) joint ventures.

Joint venture assets

Two joint ventures have been established through:

- Asset Agreement for River Murray Operations Assets (RMO Assets)
- Further Agreement on Addressing Water Overallocation and Achieving Environmental Objectives in the Murray–Darling Basin–Control and Management of Living Murray Assets (LMI Assets).

Under the agreements the MDBA has responsibility for managing infrastructure, plant, land, and easements, which are recorded in the RMO joint venture; and water entitlements, which are recorded in the LMI joint venture.

At 30 June 2023, the RMO joint venture held net assets of \$3.2 billion, including the Hume Dam, the Dartmouth Dam and the locks and weirs on the River Murray. The RMO infrastructure asset base underwent a management valuation which resulted in a net valuation increment of \$157.2 million. After factoring in all additions, depreciation, disposals and revaluations, the net increase to the RMO asset base was \$118.1 million in 2022–23.

Assets acquired under the asset agreement include:

- plant and equipment purchase of \$2.5 million
- infrastructure assets constructed and held in work-in-progress of \$5.6 million.

The RMO joint venture assets are subject to periodic independent valuation with one undertaken in the 2021–22 financial year. In interim years a management valuation is undertaken. The valuation increase in the asset base during the 2022–23 financial year was a result of continued increases in international commodity prices.

The LMI joint venture held net assets of \$687.6 million, comprising gross investment in water recovery measures of \$695.9 million and accumulated impairment losses of \$8.3 million. The change in the LMI asset values during 2022–23 was the reversal of impairment on water entitlements of \$7.8 million.

Consistent with the prior year, a whole-of-government approach was adopted for the active market assessment and valuation of water entitlements. This ensured that the valuation methodology and processes were consistent for the entitlements held within the LMI portfolio and the Department of Climate Change, Energy, the Environment and Water.

Infrastructure and water entitlement assets

The MDBA performs the role of asset manager for key infrastructure and water entitlement assets throughout the Basin, on behalf of the asset-controlling governments.

Infrastructure assets, including Hume Dam, Dartmouth Dam and the locks and weirs on the River Murray, are held in the RMO joint venture.

Water entitlement assets are held in the LMI Joint Venture. These water entitlement assets were either purchased from willing sellers or acquired as a result of infrastructure improvement-based savings projects to achieve the objectives of the Living Murray program.

RMO and LMI assets do not form part of the MDBA general purpose financial statements. They are reported separately in the RMO joint venture and LMI joint venture special purpose financial statements. These special purpose financial statements do not form part of this annual report but are independently audited on an annual basis. As part of

the preparation of RMO financial statements, the infrastructure assets are revalued periodically by an independent external valuer.

In the intervening financial years, including 2022–23, the MDBA conducts an internal revaluation by adjusting the value of its infrastructure assets using the Building Price Index, adjusted with a calibration factor of 84% to reflect the unique nature of the RMO asset base.

The last independent valuation of the infrastructure assets held in the RMO joint venture was performed in the 2021–22 financial year.

As part of the preparation of the LMI financial statements, an impairment assessment is undertaken based on an independent valuation report. Water entitlements trading prices are recorded in the state registers. The state register water trading data is refined to reliably undertake an impairment assessment that is recorded in the LMI joint venture special purpose financial statements in accordance with Australian Accounting Standards.

Both the RMO and LMI special purpose financial statements are subject to an independent audit each year. The audit for the 2022–23 financial year was completed and the financial statements distributed to all stakeholders in accordance with the requirements of the relevant asset agreements. The audits resulted in unmodified audit reports.

Independent auditor's report



INDEPENDENT AUDITOR'S REPORT

To the Minister for the Environment and Water

Opinion

In my opinion, the financial statements of the Murray-Darling Basin Authority (the Entity) for the year ended 30 June 2023:

- (a) comply with Australian Accounting Standards – Simplified Disclosures and the *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015*; and
- (b) present fairly the financial position of the Entity as at 30 June 2023 and its financial performance and cash flows for the year then ended.

The financial statements of the Entity, which I have audited, comprise the following as at 30 June 2023 and for the year then ended:

- Statement by the Accountable Authority and Chief Finance Officer;
- Statement of Comprehensive Income;
- Statement of Financial Position;
- Statement of Changes in Equity;
- Cash Flow Statement; and
- Notes to the financial statements, comprising a summary of significant accounting policies and other explanatory information.

Basis for opinion

I conducted my audit in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Entity in accordance with the relevant ethical requirements for financial statement audits conducted by the Auditor-General and his delegates. These include the relevant independence requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)* (the Code) to the extent that they are not in conflict with the *Auditor-General Act 1997*. I have also fulfilled my other responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Accountable Authority's responsibility for the financial statements

As the Accountable Authority of the Entity, the Chief Executive is responsible under the *Public Governance, Performance and Accountability Act 2013* (the Act) for the preparation and fair presentation of annual financial statements that comply with Australian Accounting Standards – Simplified Disclosures and the rules made under the Act. The Chief Executive is also responsible for such internal control as the Chief Executive determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Chief Executive is responsible for assessing the ability of the Entity to continue as a going concern, taking into account whether the Entity's operations will cease as a result of an administrative restructure or for any other reason. The Chief Executive is also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the assessment indicates that it is not appropriate.

GPO Box 707, Canberra ACT 2601
38 Sydney Avenue, Forrest ACT 2603
Phone (02) 6203 7300

Auditor's responsibilities for the audit of the financial statements

My objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian National Audit Office Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with the Australian National Audit Office Auditing Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Accountable Authority;
- conclude on the appropriateness of the Accountable Authority's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Entity to cease to continue as a going concern; and
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with the Accountable Authority regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Australian National Audit Office



Bradley Medina
Executive Director
Delegate of the Auditor-General

Canberra
28 September 2023

Murray–Darling Basin Authority

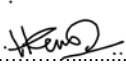
Statement by the Accountable Authority And Chief Finance Officer

In our opinion, the attached financial statements for the year ended 30 June 2023 comply with subsection 42(2) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act), and are based on properly maintained financial records as per subsection 41(2) of the PGPA Act.

In our opinion, at the date of this statement, there are reasonable grounds to believe that the Murray-Darling Basin Authority will be able to pay its debts as and when they fall due.

Signed.....

Andrew McConville
Chief Executive
28 September 2023

Signed.....

Harish Madan
Chief Finance Officer
28 September 2023

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Statement of Comprehensive Income
for the year ended 30 June 2023

	Notes	2023 \$'000	2022 \$'000	Original Budget \$'000
NET COST OF SERVICES				
Expenses				
Employee benefits	1.1A	41,695	36,328	40,874
Suppliers	1.1B	116,639	107,358	163,525
Grants	1.1C	11,767	20,885	10,572
Depreciation and amortisation	2.2	4,772	4,619	4,541
Write-down and impairment of assets	1.1D	497	-	-
Finance costs	1.1E	236	281	236
Total expenses		175,606	169,471	219,748
Own-source revenue				
Contributions from jurisdictions	1.2A	101,672	101,460	101,672
Interest		5,937	158	2,500
Other revenue	1.2B	16,294	16,764	16,502
Total own-source revenue		123,903	118,382	120,674
Gains/(Losses)				
Other Gains/(Losses)	1.2C	133	(21)	85
Total Gains/(Losses)		133	(21)	85
Total own-source income		124,036	118,361	120,759
Net cost of services		(51,570)	(51,110)	(98,989)
Revenue from Government	1.2D	53,147	80,770	53,147
Surplus/(Deficit) attributable to the Australian Government		1,577	29,660	(45,842)
Other comprehensive income		-	-	-
Total comprehensive income attributable to the Australian Government		1,577	29,660	(45,842)

The Original Budget comprises the budget as disclosed in the October 2022 Portfolio Budget Statements (PBS) 2022-23.

The above statement should be read in conjunction with the accompanying notes.

Budget Variance Commentary

Budget variance explanations are outlined in Note 5. The Original Budget amounts have been adjusted so as to be consistent with the financial statements classification.

Statement of Financial Position
as at 30 June 2023

	Notes	2023 \$'000	2022 \$'000	Original Budget \$'000
ASSETS				
Financial assets				
Cash and cash equivalents	2.1A	195,313	187,422	129,698
Trade and other receivables	2.1B	15,563	15,604	15,641
Total financial assets		210,876	203,026	145,339
Non-financial assets¹				
Buildings	2.2	11,018	14,514	12,287
Property, plant and equipment	2.2	1,423	1,856	1,847
Intangibles	2.2	10,296	4,843	12,192
Prepayments		636	591	5,159
Total non-financial assets		23,373	21,804	31,485
Total assets		234,249	224,830	176,824
LIABILITIES				
Payables				
Suppliers	2.3A	26,168	22,202	22,202
Other payables	2.3B	2,199	2,060	2,098
Total payables		28,367	24,262	24,300
Interest bearing liabilities				
Lease liabilities	2.4	9,154	11,781	9,547
Total interest bearing liabilities		9,154	11,781	9,547
Provisions				
Employee provisions	3.1	11,872	10,237	10,237
Other provisions	2.5	989	1,100	1,132
Total provisions		12,861	11,337	11,369
Total liabilities		50,382	47,380	45,216
Net assets		183,867	177,450	131,608
EQUITY				
Contributed equity		15,177	10,337	10,337
Reserves		86,607	411	2
Retained earnings		82,083	166,702	121,269
Total equity		183,867	177,450	131,608

The above statement should be read in conjunction with the accompanying notes.

¹ Right-of-use assets are included in the line items: Buildings and Property, plant and equipment.

Budget Variance Commentary

Budget variance explanations are outlined in Note 5. The Original Budget amounts have been adjusted so as to be consistent with the financial statements classification.

Statement of Changes in Equity
for the year ended 30 June 2023

	Contributed Equity ¹ \$'000	Retained Earnings \$'000	Reserves		Total \$'000
			Specific Purpose Funds Reserve ² \$'000	Asset Revaluation Reserve \$'000	
Balance at 1 July 2021	(1,852)	137,042	-	411	135,601
Comprehensive income					
Surplus for the year	-	29,660	-	-	29,660
Total comprehensive income	-	29,660	-	-	29,660
Transaction with owners					
Contributions by owners					
Equity injection	12,189	-	-	-	12,189
Total transaction with owners	12,189	-	-	-	12,189
Balance at 30 June 2022	10,337	166,702	-	411	177,450
Comprehensive income					
Surplus for the year	-	1,577	-	-	1,577
Total comprehensive income	-	1,577	-	-	1,577
Transaction with owners					
Contributions by owners					
Equity injection	4,840	-	-	-	4,840
Total transaction with owners	4,840	-	-	-	4,840
Transfer in/out reserves					
Transfer from/(to) Specific Purpose Funds Reserve	-	(86,196)	86,196	-	-
Total transfer in/(out) reserves	-	(86,196)	86,196	-	-
Balance at 30 June 2023	15,177	82,083	86,196	411	183,867
Original Budget	10,337	121,269	-	2	131,608

The above statement should be read in conjunction with the accompanying notes.

¹ The negative contributed equity is a historical legacy relating to the transition of the Murray-Darling Basin Commission (MDBC) to the Murray-Darling Basin Authority (Authority) on 15 December 2008. As part of the transition arrangement, all cash held by the MDBC totalling \$441.488 million was paid to the Official Public Account (OPA) before being appropriated to the Authority. Once appropriated to the Authority these funds were recorded as revenue in the financial statements of the Authority.

² In 2022-23, the Authority established the Specific Purpose Funds Reserve in order to provide disclosure for the funding received but not expensed for the joint programs and various Memorandums of Understanding. Please refer to Overview Note for further details.

For further detail on current year financial performance compared to the Original Budget please refer to the Budget variance explanations as outlined in Note 5.

Accounting Policy

Equity Injections

Amounts appropriated which are designated as 'equity injections' for a year (less any formal reductions) and Departmental Capital Budgets (DCBs) are recognised directly in contributed equity in that year.

Budget Variance Commentary

Budget variance explanations are outlined in Note 5. The Original Budget amounts have been adjusted so as to be consistent with the financial statements classification.

Cash Flow Statement
for the year ended 30 June 2023

	Notes	2023 \$'000	2022 \$'000	Original Budget \$'000
OPERATING ACTIVITIES				
Cash received				
Receipts from Government		53,147	80,770	53,147
Contributions from jurisdictions		103,553	91,850	101,672
Interest		5,393	53	2,500
Net GST received		13,831	11,180	19,448
Other		13,888	16,385	16,502
Total cash received		189,812	200,238	193,269
Cash used				
Employees		39,921	37,658	40,874
Suppliers		124,991	113,794	181,831
Grants		12,712	22,071	11,629
Interest payments on lease liabilities		199	244	204
Total cash used		177,823	173,767	234,538
Net cash from/(used by) operating activities		11,989	26,471	(41,269)
INVESTING ACTIVITIES				
Cash received				
Proceeds from sales		88	-	-
Total cash received		88	-	-
Cash used				
Purchase of property, plant and equipment		256	45	2,007
Purchase of intangible assets		6,104	2,718	12,214
Total cash used		6,360	2,763	14,221
Net cash (used by) investing activities		(6,272)	(2,763)	(14,221)
FINANCING ACTIVITIES				
Cash received				
Contributed equity		4,840	12,189	-
Total cash received		4,840	12,189	-
Cash used				
Principal payments of lease liabilities		2,666	2,538	2,234
Total cash used		2,666	2,538	2,234
Net cash from/(used by) financing activities		2,174	9,651	(2,234)
Net Increase/(decrease) in cash held		7,891	33,359	(57,724)
Cash and cash equivalents at the beginning of the reporting period		187,422	154,063	187,422
Cash and cash equivalents at the end of the reporting period	2.1A	195,313	187,422	129,698

The above statement should be read in conjunction with the accompanying notes.

Budget Variance Commentary

Budget variance explanations are outlined in Note 5. The Original Budget amounts have been adjusted so as to be consistent with the financial statements classification.

Overview

Objectives of the Murray-Darling Basin Authority

The Murray-Darling Basin Authority (the Authority) is an Australian Government controlled corporate Commonwealth Authority established by the *Water Act 2007*. It is a not-for-profit entity. The principal objective of the Authority is to manage the Murray-Darling Basin's water resources in the national interest so that there may be an equitable and sustainable use of the Basin's resources.

The continued existence of the Authority in its present form and with its present programs is dependent on:

- Funding from Basin jurisdictions towards meeting the cost of Murray-Darling Basin Agreement functions; and
- Government policy and on continuing funding by the Commonwealth Government for the Authority's administration and programs relating to the Basin Plan and Murray-Darling Basin Agreement functions.

The Authority's activities are classified as departmental. Departmental activities involve the use of assets, liabilities, income and expenses controlled or incurred by the Authority in its own right.

The Basis of Preparation

The financial statements are required by section 42 of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act).

The financial statements have been prepared in accordance with:

- a) *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015* (FRR); and
- b) Australian Accounting Standards and Interpretations – including simplified disclosures for Tier 2 Entities under AASB 1060 issued by the Australian Accounting Standards Board (AASB) that apply for the reporting period.

The financial statements have been prepared on an accrual basis and in accordance with the historical cost convention except for certain assets and liabilities reported at fair value. Except where stated, no allowance has been made for the effect of changing prices on the results or the financial position.

The financial statements are presented in Australian dollars and values are rounded to the nearest thousand dollars unless otherwise specified.

Unless alternative treatment is specifically required by an accounting standard, income and expenses are recognised in the Statement of Comprehensive Income, when and only when the flow, consumption or loss of economic benefits has occurred and can be reliably measured.

New Accounting Standards

Adoption of New Australian Accounting Standard Requirements

Two amending standards (AASB 2021-2 and AASB 2021-6) were adopted earlier than the application date as stated in the standard. These amending standards have been adopted for the 2022-23 reporting period.

Standard/ Interpretation	Nature of change in accounting policy, transitional provisions, and adjustment to financial statements
AASB 2021-2 <i>Amendments to Australian Accounting Standards – Disclosure of Accounting Policies and Definition of Accounting Estimates</i> (AASB 2021-2) and	AASB 2021-2 amends AASB 7, AASB 101, AASB 108, AASB 134 and AASB Practice Statement 2. The amending standard requires the disclosure of material, rather than significant, accounting policies, and clarifies what is considered a change in accounting policy compared to a change in accounting estimate.
AASB 2021-6 <i>Amendments to Australian Accounting Standards – Disclosure of Accounting Policies: Tier 2 and Other Australian Accounting Standards</i> (AASB 2021-6)	AASB 2021-6 amends the Tier 2 reporting requirements set out in AASB 1049, AASB 1054 and AASB 1060 to reflect the changes made by AASB 2021-2. The amending standards do not have a material impact on the Authority's financial statements for the current reporting period or future reporting periods.

Specific Purpose Funds Reserve

During 2023, MDBA has established a Specific Purpose Funds Reserve as a separate class of equity. The nature and purpose of this reserve is to capture and separately disclose the accumulated unspent funds relating to:

- Contributions from jurisdictions received under the Joint Programs; and
- Memorandums of Understandings (MOUs) with other entities.

Joint Programs

Joint Programs funding is provided to the MDBA annually, based on the Joint Program work plan approved by the Ministerial Council. Funding consists of Jurisdiction contributions and other revenue generated for the Joint Program, primarily for royalties from hydropower generation, rental income, and Salinity recoveries. Unspent funds for the Joint Programs, are represented in the Specific Purpose Funds Reserve and communicated annually to the Ministerial Council. Please also refer to Note 1.2A for the revenue recognised in relation to Joint Programs..

MOUs

MOU funding is provided to the MDBA through written agreements between the MDBA and one or more parties, generally Commonwealth government entities. The MOU defines the working relationship, expectations, and responsibilities, with a requirement to deliver outputs in relation to a specific purpose and objectives. These types of MOU funding arrangements are overseen by specific governance arrangements including Steering Committees and Governance Panels. These governance arrangements determine the way in which funds are utilised over the course of the related projects in accordance with the written agreements. Please also refer to Note 1.2B for the revenue recognised in relation to these arrangements.

At the end of each financial year, any accumulated unspent amounts are transferred from Retained Earnings to the Specific Purpose Funds Reserve. Any unmet funding to meet current year expenditure related to the Joint Programs or MOUs, will be drawn from Retained Earnings and transferred to the Specific Purpose Funds Reserve. Transfers to / from the Specific Purpose Funds Reserve are approved by the MDBA Accountable Authority. The initial transfer for the cumulative unspent funds to the Specific Purpose Funds Reserve for the year ended 30 June 2023 was \$86.196 million.

Taxation

The Authority is exempt from all forms of taxation except for Fringe Benefits Tax (FBT) and the Goods and Services Tax (GST).

Revenues, expenses and assets are recognised net of GST except:

- where the amount of GST incurred is not recoverable from the Australian Taxation Office; and
- for receivables and payables, other than accrued assets and liabilities which are based on estimates, are recognised inclusive of GST.

Events After the Reporting Period

No matters or circumstances have arisen since the end of the financial year which significantly affected or may affect the operations of the Authority, the results of these operations or state of affairs of the Authority in subsequent years.

Financial Performance

This section analyses the financial performance of the Authority for the year ended 30 June 2023.

Note 1.1: Expenses

	2023 \$'000	2022 \$'000
Note 1.1A: Employee Benefits		
Wages and salaries	29,784	27,060
Superannuation:		
Defined contribution plans	4,024	3,554
Defined benefit plans	1,518	1,637
Leave and other entitlements	6,284	4,025
Separation and redundancies	85	52
Total employee benefits	41,695	36,328

Accounting policy

Accounting policies for employee related expenses are outlined in Note 3.1.

Note 1.1B: Suppliers

Goods and services supplied or rendered

Expenditure by State Constructing Authorities	63,255	65,495
Water licence fee	4,914	4,967
Consultants and contractors	40,203	29,629
Communication and IT services	3,623	3,743
Other employment related expenses	1,213	991
Committee expenses	400	192
Travel	1,212	497
Other	1,688	1,686
Goods and services supplied or rendered	116,508	107,200

Goods and services are made up of:

Provision of goods	353	275
Rendering of services	116,155	106,925
Total goods and services supplied or rendered	116,508	107,200

Other suppliers

Short-term leases	41	66
Workers' compensation expenses	90	92
Total other suppliers	131	158
Total suppliers	116,639	107,358

The Authority has no short-term lease commitments as at 30 June 2023.

The above lease disclosure should be read in conjunction with the accompanying notes 1.1D, 2.2 and 2.4.

Note 1.1: Expenses - continued

Accounting policy

Short-term leases and leases of low-value assets

The Authority has elected not to recognise right-of-use assets and lease liabilities for short-term leases of assets that have a lease term of 12 months or less and leases of low-value assets (less than \$10,000 per asset). The Authority recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

	2023 \$'000	2022 \$'000
Note 1.1C: Grants		
State and Territory Governments	10,338	11,381
South Australian Riverland Floodplains Integrated Infrastructure Program	-	8,000
Private sector:		
Commercial entities	-	210
Non-profit institutions	1,040	727
Other	389	567
Total grants	11,767	20,885

Accounting policy

The Authority administers a number of grant schemes. Grant liabilities are recognised to the extent that (i) the services required to be performed by the grantee have been performed, or (ii) the grant eligibility criteria have been satisfied, but payments due have not been made. When the Authority enters into an agreement to make these grants for the services, but the related services have not been performed or the underlying criteria not satisfied, this is considered a commitment.

Note 1.1D: Write-Down and Impairment of Assets

Impairment of trade receivables	497	-
Total write-down and impairment of assets	497	-

Note 1.1E: Finance Costs

Unwinding of discount on make good provision	37	37
Interest on lease liabilities	199	244
Total finance costs	236	281

Accounting policy

All borrowing costs are expensed as incurred.

The above lease disclosures should be read in conjunction with the accompanying notes 1.1B, 2.2 and 2.4.

Note 1.2: Own-Source Revenue and Gains

	2023	2022
Own-Source Revenue	\$'000	\$'000

Note 1.2A: Contributions from Jurisdictions

Australian Government	14,304	14,622
New South Wales	31,302	32,374
Victoria	31,429	29,926
South Australia	24,373	24,192
Queensland	114	112
Australian Capital Territory	150	234
Total contributions from jurisdictions	101,672	101,460

Accounting policy

The Authority receives contributions from jurisdictions based on an agreed contributions model (the model). The model is based on a number of different requirements including specific provisions under the Murray-Darling Basin Agreement. These contributions are recognised as revenue when received or when the Authority gains control over the underlying assets.

Note 1.2B: Other Revenue

Hydropower generation	3,876	2,449
Funding from other MOUs ¹	6,241	10,658
Contributions by States - Salinity program	1,626	1,113
Revenue from use of Land and Cottage	1,245	762
Resources received free of charge - Remuneration of auditors	85	85
Barmah Choke feasibility study project	2,500	500
Other	721	1,197
Total other revenue	16,294	16,764

¹ Amounts relate to revenue received for Memorandums of Understanding (MOUs) signed with the Department of Climate Change, Energy, the Environment and Water (DCCEEW) for the Murray-Darling Basin Water and Environment Research Program and Sustainable Diversion Limit Adjustment Mechanism Project.

Accounting policy

Hydropower generation

Hydroelectricity revenue is generated when the release of water from Hume and Dartmouth Dams is routed through electricity generating plants. The Authority received payments based on recovery of a set percentage of the hydroelectricity revenue generated by the plants during the period.

Funding from other MOUs

Revenue is recognised based on milestones achieved during the period as set out in the relevant MOUs.

Contributions by States - Salinity program

Revenue is recognised as costs are incurred, as this program operates on a cost recovery basis.

Revenue from use of Land and Cottage

Rental revenue is recognised based on the use of land and cottage.

Resources Received Free of Charge

Resources received free of charge are recognised as revenue when, and only when, a fair value can be reliably determined and the services would have been purchased if these had not been donated. Use of those resources is recognised as an expense. Resources received free of charge are recorded as either revenue or gains depending on their nature.

Note 1.2: Own-Source Revenue and gains - continued

Barmah Choke feasibility study project

Revenue received from NSW government for the Barmah Choke feasibility study. Revenue is recognised on the basis of milestone achievement.

Other revenue

Other revenue comprises miscellaneous revenue that is recognised both at a point in time and over time, depending on the nature of the transaction.

	2023	2022
	\$'000	\$'000
Gains/(Losses)		

Note 1.2C: Other Gains/(Losses)

Gain on reversal of provisions	148	-
(loss) on disposal/write-off of assets	(15)	(21)
Total other gains/(losses)	133	(21)

Revenue from Government

Note 1.2D: Revenue from Government

Corporate Commonwealth entity payment item from portfolio department	53,147	80,770
Total revenue from Government	53,147	80,770

Accounting Policy

Funding received or receivable from non-corporate Commonwealth entities (appropriated to the Department of Climate Change, Energy, the Environment and Water as a corporate Commonwealth entity payment item for payment to the Authority) is recognised as Revenue from Government by the Authority unless the funding is in the nature of an equity injection or a loan.

Financial Position

This section analyses the Authority's assets used to conduct its operations and the operating liabilities incurred as a result. Employee related information is disclosed in the People and Relationships section.

Note 2.1: Financial Assets

	2023 \$'000	2022 \$'000
Note 2.1A: Cash and Cash Equivalents		
Cash on hand	195,313	187,422
Total cash and cash equivalents	195,313	187,422

Accounting policy

Cash is recognised at its nominal amount. Cash and cash equivalents include cash on hand and any deposits in bank accounts with an original maturity of three months or less that are readily convertible to known amounts of cash and subject to insignificant risk of changes in value.

Note 2.1B: Trade and Other Receivables

Trade Receivables	11,851	10,210
Net GST receivable from the Australian Taxation Office	2,490	3,353
Other Receivables	1,719	2,041
Total trade and other receivables (gross and net)	16,060	15,604
Less expected credit loss allowance	(497)	-
Total trade and other receivables (net)	15,563	15,604

Credit terms for trade receivables were within 30 days (2022: 30 days).

Accounting policy

Trade receivables and other receivables that are held for the purpose of collecting the contractual cash flows where the cash flows are solely payments of principal and interest, that are not provided at below-market interest rates, are subsequently measured at amortised cost using the effective interest method adjusted for any loss allowance.

Note 2.2: Non-Financial Assets

Note 2.2: Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment and Intangibles

Reconciliation of the opening and closing balances for 2023

	Buildings \$'000	Property, plant & equipment \$'000	Intangible assets		Total \$'000
			Computer software \$'000	Data sets \$'000	
As at 1 July 2022					
Gross book value	23,530	2,878	7,773	4,422	38,603
Accumulated depreciation, amortisation and impairment	(9,016)	(1,022)	(6,671)	(681)	(17,390)
Total as at 1 July 2022	14,514	1,856	1,102	3,741	21,213
Additions					
Purchase or internally developed	-	256	5,860	243	6,359
Right-of-use assets	-	39	-	-	39
Assets Transfer	-	-	2,985	(2,985)	-
Depreciation and amortisation	(982)	(564)	(551)	(96)	(2,193)
Depreciation on right-of-use assets	(2,514)	(65)	-	-	(2,579)
Disposals (Net Book Value)	-	(99)	-	(4)	(103)
Total as at 30 June 2023	11,018	1,423	9,396	899	22,736
Total as at 30 June 2023 represented by					
Gross book value	23,530	2,832	16,619	1,554	44,535
Accumulated depreciation, amortisation and impairment	(12,512)	(1,409)	(7,223)	(655)	(21,799)
Total as at 30 June 2023	11,018	1,423	9,396	899	22,736
Total intangible assets			10,295		
Carrying amount of right-of-use assets included in the above total	8,122	69	-	-	8,191

Revaluation of non-financial assets

All revaluations were conducted in accordance with the revaluation policy stated at Note 2.2. On 31 March 2021, an independent valuer, Deloitte Touche and Tohmatsu, conducted the fair value assessment of the carrying values of all leasehold improvements and property, plant and equipment assets, excluding lease right of use assets. If at any time management considers that the carrying amount of an asset class to materially differ from its fair value, then the assets within that class will be revalued regardless of when the last valuation took place.

There is no commitment or expectation to dispose or sell any leasehold improvement, property, plant and equipment or intangible assets within the next 12 months.

There is no capital commitment expected within the next 12 months (2022: \$156,740).

Accounting policy

Acquisition of Assets

Assets are recorded at cost on acquisition except as stated below. The cost of acquisition includes the fair value of assets transferred in exchange and liabilities undertaken. Financial assets are initially measured at their fair value plus transaction costs where appropriate.

Assets acquired at no cost, or for nominal consideration, are initially recognised as assets and income at their fair value at the date of acquisition, unless acquired as a consequence of restructuring of administrative arrangements. In the latter case, assets are initially recognised as contributions by owners at the amounts at which they were recognised in the transferor's accounts immediately prior to the restructuring.

Asset Recognition Threshold

Purchases of property, plant and equipment are recognised initially at cost in the statement of financial position, except for purchases with a cost of less than \$2,000, which are expensed in the year of acquisition (other than where these items form part of a group of similar items which are significant in total).

Lease Right-of-use (ROU) Assets

Leased ROU assets are capitalised at the commencement date of the lease and comprise the initial lease liability amount, initial direct costs incurred when entering into the lease less any lease incentives received. These assets are accounted for as separate asset classes to corresponding assets owned outright, but included in the same column where the corresponding underlying assets would be presented if lease items were owned.

The initial cost of an ROU asset also includes an estimate of the cost of dismantling and removing the item and restoring the site on which it is located. This is particularly relevant to 'make good' provisions in property leases taken up by the Authority where there exists an obligation to restore the property to its original condition. These costs are included in the value of the Authority's ROU assets and leasehold improvements (recognised prior to the adoption of AASB 16) with a corresponding provision for the 'make good' recognised.

Accounting policy (continued)

Revaluation

Following initial recognition at cost, property, plant and equipment (excluding ROU assets) is carried at fair value less subsequent accumulated depreciation and accumulated impairment losses. Valuations are conducted with sufficient frequency to ensure the carrying amounts of assets do not differ materially from the assets' fair values as at the reporting date. The regularity of independent valuations depends upon the volatility of movements in market values for the relevant assets.

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reverses a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets are recognised directly in the surplus/deficit except to the extent that these amounts reverse a previous revaluation increment for that class.

Any accumulated depreciation as at the revaluation date is eliminated against the gross carrying amount of the asset and the asset restated to the revalued amount.

Depreciation

Depreciable property, plant and equipment assets are written-off to their estimated residual values over their estimated useful lives using the straight-line method of depreciation.

Depreciation rates (useful lives), residual values and methods are reviewed at each reporting date and necessary adjustments are recognised in the current, or current and future reporting periods, as appropriate.

Depreciation and/or amortisation rates applying to each class of asset are based on the following useful life estimates:

Asset Class	2023	2022
Computers and IT equipment	3-7 years	3-7 years
Office equipment	6-9 years	6-9 years
Leasehold improvements	Lease term	Lease term
Data sets	3-20 years	3-20 years
Software applications	2-7 years	2-4 years

The depreciation rates for ROU assets are based on the commencement date to the earlier of the end of the useful life of the ROU asset or the end of the lease term.

Impairment

All assets were assessed for indications of impairment at 30 June 2023. Where indications of impairment exist, each asset's recoverable amount is estimated and an impairment adjustment made if the asset's recoverable amount is less than its carrying amount. The recoverable amount of an asset is the higher of its fair value less costs of disposal and its value in use. Value in use is the present value of the future cash flows expected to be derived from the asset. Where the future economic benefit of an asset is not primarily dependent on the asset's ability to generate future cash flows, and the asset would be replaced if the Authority were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

Derecognition

An item of property, plant and equipment is derecognised upon disposal or when no further future economic benefits are expected from its use or disposal.

Intangibles

The Authority's intangible assets comprise internally developed software and acquired data-sets for internal use. These assets are carried at cost less accumulated amortisation and accumulated impairment losses.

All intangible assets in use are amortised on a straight-line basis over its anticipated useful life. All intangible assets were assessed by the Authority for indications of impairment as at 30 June 2023.

Note 2.3: Payables

	2023 \$'000	2022 \$'000
Note 2.3A: Suppliers		
Trade creditors and accruals	26,168	22,202
Total suppliers	26,168	22,202
Note 2.3B: Other Payables		
Wages and salaries	1,484	1,395
Superannuation	167	117
Unearned income	548	548
Total other payables	2,199	2,060

Accounting policy

The Authority's financial liabilities consist of trade creditors and expense accruals. These liabilities are recognised at their nominal amounts, being the amounts at which the Authority expects the liabilities will be settled. Liabilities are recognised to the extent the goods or services have been received (and irrespective of receipt of supplier invoices).

Unearned income represents assets received from another party in advance of the Authority fulfilling its contracted obligations. The Authority releases unearned income to revenue when the services required to be performed have been performed.

Note 2.4: Leases

	2023 \$'000	2022 \$'000
Note 2.4: Leases		
Lease liabilities	9,154	11,781
Total leases	9,154	11,781

Total cash outflow for leases for the year ended 30 June 2023 was \$2,865,398 (2022: \$2,782,104).

Maturity analysis - contractual undiscounted cash flows

Within 1 year	2,862	2,861
Between 1 to 5 years	9,420	9,452
Total leases	12,282	12,313

The Authority in its capacity as lessee has leases for office accommodation in Griffith, Mildura, Murray Bridge and Canberra. The leases in Canberra and Murray Bridge include office accommodation and carparking.

Lease payments are subject to annual increases of 3% in the Griffith, Mildura and Murray Bridge Offices, and an annual rate increase of 3.75% for the Canberra leases. These lease agreements are non-cancellable in the normal course of business.

The above lease disclosures should be read in conjunction with the accompanying notes 1.1B, 1.1D and 2.2.

Accounting Policy

For all new contracts entered into, the Authority considers whether the contract is, or contains a lease. A lease is defined as 'a contract, or part of a contract, that conveys the right to use an asset (the underlying asset) for a period of time in exchange for consideration'.

Once it has been determined that a contract is, or contains a lease, the lease liability is initially measured at the present value of the lease payments unpaid at the commencement date, discounted using the interest rate implicit in the lease, if that rate is readily determinable, or the Authority's incremental borrowing rate.

Subsequent to initial measurement, the liability will be reduced for payments made and increased for interest unwound. It is remeasured to reflect any reassessment or modification to the lease. When the lease liability is remeasured, the corresponding adjustment is reflected in the right-of-use asset or profit and loss depending on the nature of the reassessment or modification.

Note 2.5: Other Provisions

	2023 \$'000	2022 \$'000
Note 2.5: Other Provisions		
Provision for make good	989	1,100
Total other provisions	989	1,100

	Provision for make good \$'000	Total \$'000
Carrying amount 1 July 2022	1,100	1,100
Unwinding of discount or change in discount rate	37	37
Reversal of prior year provision	(148)	(148)
Closing balance 30 June 2023	989	989

People and Relationships

This section describes a range of employment and post employment benefits provided to our people and our relationships with other key people.

Note 3.1: Employee Provisions

	2023	2022
	\$'000	\$'000
Note 3.1: Employee Provisions		
Leave and other entitlements	11,872	10,237
Total employee provisions	11,872	10,237

Accounting policy

Employee benefits

Leave

The liability for employee benefits includes provision for annual leave and long service leave. No provision has been made for sick leave as all sick leave is non-vesting and the average sick leave taken in future years by employees of the Authority is estimated to be less than the annual entitlement for sick leave.

The leave liabilities are calculated on the basis of employees' remuneration at the estimated salary rates that will be applied at the time the leave is taken, including the Authority's employer superannuation contribution rates to the extent the leave is likely to be taken during service rather than paid out on termination.

The liability for long service leave has been determined using the Shorthand Method as per the *Public Governance, Performance and Accountability (Financial Reporting) Rule* (FRR) and Commonwealth Entity Financial Statements Guide. The estimate of the present value of the liability takes into account employee attrition rates and pay increases through promotion and inflation.

Superannuation

The Authority's employees are members of the Commonwealth Superannuation Scheme (CSS), the Public Sector Superannuation Scheme (PSS), the PSS accumulation plan (PSSap) or other employee nominated superannuation funds.

The CSS and PSS are defined benefit schemes for the Australian Government. The remaining funds are defined contribution schemes.

The liability for defined benefits is recognised in the financial statements of the Australian Government and is settled by the Australian Government in due course. This liability is reported in the Department of Finance's administered schedules and notes.

The Authority makes employer contributions to the employees' superannuation schemes at rates determined by an actuary to be sufficient to meet the current cost to the Government. The Authority accounts for the contributions as if these amounts were contributions to defined contribution plans.

The Authority also contributes to a number of complying funds to discharge the Authority's liability in regard to individual employees and the *Superannuation Guarantee (Administration) Act 1992* as well as to facilitate the salary sacrifice options of employees.

The liability for superannuation recognised as at 30 June represents outstanding contributions at the end of the reporting period. This amount is disclosed in Note 2.3B.

Note 3.2: Key Management Personnel Remuneration

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Authority, directly or indirectly, including any director (whether executive or otherwise) of that Authority. The Authority has determined the key management personnel to include the Minister for the Environment and Water, Authority members, the Chief Executive and Portfolio Leads within the Authority and any employee who has acted in one of the Portfolio Lead roles for longer than three months. Key management personnel remuneration is reported in the table below:

	2023 \$'000	2022 \$'000
Short-term employee benefits	2,090	1,977
Other long-term employee benefits ¹	148	(36)
Post-employment benefits	230	265
Total key management personnel remuneration expenses²	2,468	2,206

The total number of key management personnel included in the above table is 11 (2022: 15).

¹ The negative amount in 2022 is primarily as a result of a decrease in long service leave provisions due to the movement in the Government long term bond rate.

² The above key management personnel remuneration excludes the remuneration and other benefits of the Portfolio Minister. The Portfolio Minister's remuneration and other benefits are set by the Remuneration Tribunal and are not paid by the entity.

Note 3.3: Related Party Disclosures

Related party relationships:

The Authority is an Australian Government controlled entity. Related parties to this entity are Key Management Personnel (as detailed in Note 3.2), Minister for Climate Change and Energy, Minister for the Environment and Water, Cabinet Ministers, Members of the Ministerial Council, the Living Murray Initiatives & River Management Operations joint ventures and other Australian Government entities.

Transactions with related parties:

Given the breadth of Government activities, related parties may transact with the government sector in the same capacity as ordinary citizens. Such transactions include the payment or refund of taxes, receipt of a Medicare rebate or higher education loans. These transactions have not been separately disclosed in this disclosure note. The Authority does not pay any member of the Ministerial Council for the services they provide to the Authority under the Murray-Darling Basin Agreement.

There were no other transactions with related parties during the 2023 financial year (2022: Nil).

Managing uncertainties

This section analyses how the Authority manages financial risks within its operating environment.

Note 4.1: Contingent Assets and Liabilities

Quantifiable Contingencies

There are no quantifiable contingent assets or liabilities in the current or prior financial year.

Unquantifiable Contingencies

There is one unquantifiable contingent liability that relates to a claim which effectively commenced in May 2019 asserting negligence in relation to the Authority and Authority delegates' performance of function under the *Water Act 2007* (Cth). Damages are unquantifiable. The Authority's insurer Comcover has been notified of this claim.

Under Section 239F of the *Water Act 2007*, the liabilities of the Murray-Darling Basin Commission (the Commission) became liabilities of the Authority. These liabilities pertain to the former Commission and include any liability, duty or obligation, whether contingent or prospective; but does not include a liability, duty or obligation imposed by:

This includes any liability, duty or obligation, whether contingent or prospective; but does not include a liability, duty or obligation imposed by:

- an Act; or
- regulations or other subordinate legislation made under an Act; or
- the *Murray-Darling Basin Act 1992* of New South Wales; or
- the *Murray-Darling Basin Act 1993* of Victoria; or
- the *Murray-Darling Basin Act 1996* of Queensland; or
- the *Murray-Darling Basin Act 1993* of South Australia; or
- the former Murray-Darling Basin Agreement.

There were no such unquantifiable contingent assets during the 2023 financial year as at 30 June 2023 (2022: Nil).

Accounting policy

Contingent liabilities and contingent assets are not recognised in the statement of financial position but are reported in the disclosure notes. These may arise from uncertainty as to the existence of a liability or asset or represent an asset or liability in respect of which the amount cannot be reliably measured. Contingent assets are disclosed when settlement is probable but not virtually certain and contingent liabilities are disclosed when settlement is greater than remote.

Note 4.2: Financial Instruments

	2023	2022
	\$'000	\$'000
Note 4.2: Categories of Financial Instruments		
Financial assets measured at amortised cost		
Cash and cash equivalents	195,313	187,422
Trade and other receivables	13,570	12,251
Total financial assets at amortised cost	208,883	199,673
Total financial assets	208,883	199,673
Financial Liabilities		
Financial liabilities measured at amortised cost		
Trade creditors and accruals	26,168	22,202
Total financial liabilities measured at amortised cost	26,168	22,202
Total financial liabilities	26,168	22,202

Accounting policy

Financial Assets

The Authority classifies its financial assets in the following categories:

- financial assets at fair value through profit or loss;
- financial assets at fair value through other comprehensive income; and
- financial assets measured at amortised cost.

The classification depends on both the Authority's business model for managing the financial assets and contractual cash flow characteristics at the time of initial recognition. Financial assets are recognised when the Authority becomes a party to the contract and, as a consequence, has a legal right to receive or a legal obligation to pay cash and derecognised when the contractual rights to the cash flows from the financial asset expire or are transferred upon trade date.

Financial Liabilities

Financial liabilities are classified as either financial liabilities 'at fair value through profit or loss' or other financial liabilities.

The Authority only holds financial instruments carried at amortised cost.

Financial Assets at Amortised Cost

Financial assets included in this category need to meet two criteria:

- the financial asset is held in order to collect the contractual cash flows; and
- the cash flows are solely payments of principal and interest (SPPI) on the principal outstanding amount.

Amortised cost is determined using the effective interest method.

Effective Interest Method

Income is recognised on an effective interest rate basis for financial assets that are recognised at amortised cost.

Impairment of Financial Assets

Financial assets are assessed for impairment at the end of each reporting period based on Expected Credit Losses, using the general approach which measures the loss allowance based on an amount equal to lifetime expected credit losses where risk has significantly increased, or an amount equal to 12-month expected credit losses if risk has not increased.

The simplified approach for trade and other receivables is used. This approach always measures the loss allowance as the amount equal to the lifetime expected credit losses.

A write-off constitutes a derecognition event where the write-off directly reduces the gross carrying amount of the financial asset.

Financial Liabilities at Amortised Cost

Financial liabilities are recognised and derecognised upon 'trade date'. Financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs. These liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective interest basis. Supplier payables and accruals are recognised at amortised cost. Liabilities are recognised to the extent that the goods or services have been received (and irrespective of receipt of an invoice).

Note 4.3: Fair Value Measurements

Accounting policy

The Authority's assets are held for operational purposes and not held for the purposes of deriving a profit. The current use of all non-financial assets is considered their highest and best use.

The Authority's policy is to recognise transfers into and transfers out of fair value hierarchy levels as at the end of the reporting period. There have been no transfers between level 1 and level 2 of the hierarchy during the year.

Note 4.3: Fair Value Measurements

	Fair value measurements	
	2023	2022
ASSETS		
Assets measured at fair value on a recurring basis		
Buildings	2,896	3,877
Property, plant and equipment	1,354	1,762
Total assets measured at fair value	4,250	5,639
Assets measured at other than fair value, but approximate fair value		
Cash and cash equivalents	195,313	187,422
Trade and other receivables	15,563	15,604
Other non-financial assets	636	591
Total assets measured at other than fair value, but approximate fair value	211,512	203,617

Other information

Note 4.4: Current/Non-current Distinction for Assets and Liabilities

	2023 \$'000	2022 \$'000
Note 4.4: Current/non-current distinction for assets and liabilities		
Assets expected to be recovered in:		
No more than 12 months		
Cash and cash equivalents	195,313	187,422
Trade and other receivables	15,563	15,604
Prepayments	533	509
Total no more than 12 months	211,409	203,535
More than 12 months		
Buildings	11,018	14,514
Property, plant and equipment	1,423	1,856
Intangibles	10,296	4,843
Prepayments	103	82
Total more than 12 months	22,840	21,295
Total assets	234,249	224,830
Liabilities expected to be settled in:		
No more than 12 months		
Suppliers	26,168	22,202
Other payables	2,199	2,060
Employee provisions	4,550	4,211
Lease liabilities	2,278	2,662
Other provisions	-	146
Total no more than 12 months	35,195	31,281
More than 12 months		
Other provisions	989	954
Employee provisions	7,322	6,026
Lease liabilities	6,876	9,119
Total more than 12 months	15,187	16,099
Total liabilities	50,382	47,380

Budget Variances

Note 5: Explanations of Major Budget Variances

Variances are considered to be 'major' if these amounts are core to the Authority's activities and based on the following criteria:

- the variance between budget and actual is greater than +/- 10% of the Original Budget for a line item; and
- the variance between budget and actual is greater than \$1,000,000; or
- an item is below this threshold but is considered important for the reader's understanding or is relevant to an assessment of the discharge of accountability and to an analysis of the Authority's performance.

The budget is not audited.

Major variances and explanations	Affected line items
Statement of Comprehensive Income:	
Total expenses were \$44.1 million lower than the original budget estimate, mainly due to:	
• Lower than budgeted supplier expenses of \$116.6 million primarily due to the complex nature of the Joint Programs and lower than expected expenditure by State Constructing Authorities (SCAs). This complexity reflects the supply chain risk associated with capital construction and environmental projects, including technical resource availability and access to sites that can be impacted by environmental conditions.	• Suppliers
• Lower than budgeted grants expenses of \$11.8 million due to environmental conditions delaying the South Australian Riverland Floodplain Integrated Infrastructure Project (SARFIIP).	• Grants
The \$3.2 million increase of total own-source revenue against budget was driven by higher than expected interest revenue earned from increasing interest rates, as compared to historical rates.	• Interest
Statement of Financial Position:	
Total assets were \$57.4 million higher than the original budget estimate mainly due to:	
• Cash and cash equivalents were \$65.6 million higher than budget driven by decreased supplier payments and increased interest receipts.	• Cash and cash equivalents
This increase was partially offset by:	
• Intangibles and prepayments being \$6.4 million lower than budget, driven by lower than expected asset capitalisations from a revised delivery model for the Integrated River Modelling Uplift Program (IRMU).	• Intangibles • Prepayments
• Buildings being \$1.3 million lower than budget, driven by a reduction in the MDBA's property accommodation footprint.	• Buildings
Total liabilities were \$5.2 million higher than the original budget because:	
• Supplier payables were \$4.0 million higher than budget driven by an increase in accruals and the timing of invoice payments.	• Supplier payables
• Employee provisions were \$1.6 million higher than budget, primarily driven by increases in Average Staffing Levels, salary growth rates and bond rates.	• Employee provisions
Total equity was \$52.3 million higher than the original budget as a result of:	
• The above Statement of Comprehensive Income variance explanations, noting that \$86.2 million of retained earnings was transferred to the Specific Purpose Funds Reserve.	• Reserves • Retained earnings
• A \$4.8 million increase in contributed equity, is due to a capital injection not included in the original budget.	• Contributed equity
Cash Flow Statement:	
The variance explanations above impacted on the cash received and cash used. The net increase in cash held during 2022-23 was \$65.6 million higher than the original budget, which estimated a net decrease of \$57.7 million. This variance was primarily due to the decreased supplier and grant payments, higher interest revenue and lower than expected capital expenditure.	• Net increases/(decrease) in cash held

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Glossary



Assets

Structures used to control flows and supply and manage stored water. For the River Murray, these structures include 3 major storages (Dartmouth Dam, Hume Dam and Lake Victoria), 14 weirs, 13 locks, 5 barrages near the River Murray Mouth as well as environmental works and measures assets located at The Living Murray icon sites and 13 salt interception schemes.

Australian National Committee on Large Dams

An incorporated voluntary association of organisations and individual professionals with an interest in dams in Australia.

Barrages

Five low and wide weirs built at the Murray Mouth in South Australia to reduce the amount of sea water flowing in and out of the mouth due to tidal movement, and to help control water levels in the Lower Lakes and River Murray below Lock 1 at Blanchetown, South Australia.

Baseline

Conditions regarded as a reference point for the purpose of comparison.

Baseline diversion limit

The baseline limit of take from a sustainable diversion limit resource unit.

Basin governments

The Australian Government and the governments of New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory.

Basin states

New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory.

Basin water resources

Water resources within or beneath the Murray–Darling Basin, except for resources that are prescribed by the regulations and groundwater that forms part of the Great Artesian Basin.

Cap (the Cap on diversions)

A limit, implemented in 1997, on the volume of surface water that can be diverted from rivers for consumptive use. Under the Basin Plan, the Cap is replaced by long-term average sustainable diversion limits.

Connectivity

Connections between natural habitats, such as between a river channel and adjacent wetland areas. Connectivity is a measure or indicator of whether a water body (river, wetland, floodplain) has water connections or flow connections to another body.

Constraints

Anything that affects the delivery of water for the environment. Constraints can be physical, such as low-lying bridges and river channel capacity; or operational, such as river rules or operating practices that affect when and how much water can be delivered.

Conveyance water

The water needed to physically run the river system. Extra water must then be supplied on top of the conveyance water to meet deliveries along the river system. The conveyance reserve is water set aside for the next year to minimise the risk of not having enough conveyance water. Water is set aside water for conveyance and critical human needs to safeguard fundamental water requirements during a drought more severe than the millennium drought.

Critical human water needs

Under the Water Act, the minimum amount of water required to meet core requirements of communities dependent on Basin water resources. The definition also includes non-human requirements that, if not met, would cause prohibitively high social, economic or national security costs.

Cultural flows (or cultural water flows)

Water entitlements legally and beneficially owned by the First Nations of the Murray–Darling Basin. They are of sufficient and adequate quantity and quality to improve the spiritual, cultural, environmental, social and economic conditions of Aboriginal people.

Electrical conductivity (EC)

A unit of measurement for electrical conductivity (1 EC = 1 μ S/cm) measured at 25 degrees Celsius. It is commonly used as an indicator of water and soil salinity (salt concentration). Water and soil salinity levels are measured by passing an electrical current between the 2 electrodes of a salinity meter. EC is influenced by the concentration and composition of dissolved salts. Salts increase the ability of a solution to conduct an electric current, so a high EC indicates a high salinity level. Fresh water above 800 EC becomes marginal for drinking; above 1,600 EC it is brackish; and above 4,800 EC it is saline.

Entitlement (or water entitlement)

The volume of water authorised to be taken and used by an irrigator or water authority. It includes bulk entitlements, environmental entitlements, water rights, sales water and surface water and groundwater licences.

Environmental flow

Any river flow pattern provided with the intention of maintaining or improving river health.

Environmental water

Water used to achieve environmental outcomes, including benefits to ecosystem functions, biodiversity, water quality and water resource health.

Environmental water requirement

The amount of water needed to meet an ecological or environmental objective.

Fishway

A structure that provides fish with passage past an obstruction in a stream.

Flow

The movement of water—the rate of water discharged from a source, given in volume with respect to time.

Flow event

A single occurrence of water flow in a river, sometimes required to achieve environmental targets. A series of flow events comprises a flow history.

Groundwater

Water occurring naturally below ground level (in an aquifer or otherwise).

Held environmental water

Water that is available under a water access right, a water delivery right or an irrigation right for the purpose of achieving environmental outcomes.

Inflow

The source of the water that flows into a specific body of water. For a lake, the inflow could be a stream or river; for a stream or river, the inflow could be rain.

Irrigator

An irrigator is a primary producer who uses water to irrigate crops or water livestock.

Irrigation infrastructure operator

An irrigation infrastructure operator owns or operates water service infrastructure for delivering water for the primary purpose of irrigation.

Modelling

Application of a mathematical process or simulation framework (for example a mathematical or econometric model) to describe various phenomena and analyse the effects of changes in some characteristics on others.

Murray Lower Darling Rivers Indigenous Nations (MLDRIN)

Confederation formed in 1998 of Indigenous Nations from the southern part of the Basin.

Northern Basin Aboriginal Nations (NBAN)

Confederation formed in April 2010 that comprises Aboriginal Nation representatives from the northern part of the Basin.

Northern Basin Environmental Watering Group (NBEWG)

Group established in 2019 to coordinate the planning and delivery of water for the environment in the northern Murray–Darling Basin to enhance connectivity and improve environmental outcomes.

Ramsar Convention

The Convention on Wetlands of International Importance, an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

Regulated

A water system in which water is stored and/or flow levels are controlled using structures such as dams and weirs.

Salt interception schemes (SIS)

Large-scale groundwater pumping and drainage projects that intercept saline groundwater flowing into rivers and dispose of the saline waters by evaporation and aquifer storage at more distant locations.

Surface water

Includes water in a watercourse, lake or wetland, and any water flowing over or lying on the land after having precipitated naturally or risen to the surface naturally from underground (see section 4 of the Water Act).

Sustainable diversion limit (SDL)

The maximum long-term annual average quantity of water that can be taken, on a sustainable basis, from the Basin water resources as a whole, and the water resources, or particular parts of the water resources, of each water resource plan area.

Sustainable diversion limit adjustment mechanism (SDLAM)

Basin Plan provision that allows for adjustment of the sustainable diversion limit under certain circumstances.

Take [water]

Removal of water from, or reduction in flow of water into, a water resource.

Water accounting

A systematic process of identifying, recognising, quantifying, reporting and assuring information about water, the rights or other claims to water, and the obligations against water.

Water access licence

Water access licences entitle licence holders:

- to specified shares in the available water within a particular water management area or water source (the share component)
- to take water at specified times, rates or circumstances from specified areas or locations (the extraction component).

Water allocation

The water to which the holder of a water access licence is entitled from time to time under licence, as recorded in the water allocation account for the licence.

Water infrastructure

Assets used to manage water. It includes dams, weirs, flood levees and embankments, fishways, regulators, pump stations, managed aquifer recharge ponds, injection wells and desalination plants.

Abbreviations

ACSEES	Advisory Committee on Social, Economic and Environmental Sciences
AEP	Annual exceedance probability
APS	Australian Public Service
BCC	Basin Community Committee
BOC	Basin Officials Committee
BSM2030	Basin Salinity Management 2030
CEWH	Commonwealth Environmental Water Holder
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCCEEW	Department of Climate Change, Energy, the Environment and Water
EC	Electrical conductivity
GL	gigalitre (one billion litres)
IGWC	Inspector-General of Water Compliance
IPS	Information Publication Scheme
IRORG	Independent River Operations Review Group
KPI	key performance indicator
LMI	the Living Murray initiative
MDBA/ the Authority	Murray–Darling Basin Authority – the agency/the 7-member Authority
ML	megalitre (one million litres)
MLDRIN	Murray Lower Darling Rivers Indigenous Nations
NBAN	Northern Basin Aboriginal Nations
NBEWG	Northern Basin Environmental Watering Group
PGPA Act	<i>Public Governance, Performance and Accountability Act 2013</i> (Cth)
REO	Regional Engagement Officer/s
RMWQMP	River Murray Water Quality Monitoring Program
SARFIIP	South Australian Floodplains Integrated Infrastructure Program
SDL	sustainable diversion limit
SDLAM	SDL adjustment mechanism
WQAP	Water Quality Advisory Panel
WRP	water resource plan

Annual report requirements

PGPA Rule Reference	Part of Report	Description	Requirement
17BE	Contents of annual report		
17BE(a)	About the Murray–Darling Basin Authority p.13	Details of the legislation establishing the body	Mandatory
17BE(b)(i)	About the Murray–Darling Basin Authority p.13	A summary of the objects and functions of the entity as set out in legislation	Mandatory
17BE(b)(ii)	Our purpose p.13	The purposes of the entity as included in the entity's corporate plan for the reporting period	Mandatory
17BE(c)	Portfolio and ministers p.13	The names of the persons holding the position of responsible minister or responsible ministers during the reporting period, and the titles of those responsible ministers	Mandatory
17BE(d)	Ministerial directions and government policy orders p.72	Directions given to the entity by the minister under an Act or instrument during the reporting period	If applicable, mandatory
17BE(e)	Ministerial directions and government policy orders p.72	Any government policy order that applied in relation to the entity during the reporting period under section 22 of the Act	If applicable, mandatory
17BE(f)	Compliance reporting p.69	Particulars of non-compliance with: <ul style="list-style-type: none"> a. a direction given to the entity by the minister under an Act or instrument during the reporting period; or b. a government policy order that applied in relation to the entity during the reporting period under section 22 of the Act 	If applicable, mandatory
17BE(g)	Part 2 Performance p.22	Annual performance statements in accordance with paragraph 39(1)(b) of the Act and section 16F of the rule	Mandatory
17BE(h), 17BE(i)	N/A	A statement of significant issues reported to the minister under paragraph 19(1)(e) of the Act that relates to non-compliance with finance law and action taken to remedy non-compliance	If applicable, mandatory
17BE(j)	Details of the accountable authority p.126	Information on the accountable authority, or each member of the accountable authority, of the entity during the reporting period	Mandatory
17BE(k)	Organisational structure p.63	Outline of the organisational structure of the entity (including any subsidiaries of the entity)	Mandatory

PGPA Rule Reference	Part of Report	Description	Requirement
17BE(ka)	Employee arrangements p.79	Statistics on the entity's employees on an ongoing and non-ongoing basis, including the following: a) statistics on full-time employees; b) statistics on part-time employees; c) statistics in gender; d) statistics on staff location;	Mandatory
17BE(l)	Where we are located p.18	Outline of the location (whether or not in Australia) of major activities or facilities of the entity	Mandatory
17BE(m)	Corporate governance practices p.67	Information relating to the main corporate governance practices used by the entity during the reporting period	Mandatory
17BE(n), 17BE(o)	Part 4 CFO Report and financial statements p.86	For transactions with a related Commonwealth entity or related company where the value of the transaction, or if there is more than one transaction, the aggregate of those transactions, is more than \$10,000 (inclusive of GST): a. the decision-making process undertaken by the accountable authority to approve the entity paying for a good or service from, or providing a grant to, the related Commonwealth entity or related company; and b. the value of the transaction, or if there is more than one transaction, the number of transactions and the aggregate of value of the transactions.	If applicable, mandatory
17BE(p)	Part 1 Overview p.3	Any significant activities and changes that affected the operation or structure of the entity during the reporting period	If applicable, mandatory
17BE(q)	Judicial or administrative tribunal decisions p.71	Particulars of judicial decisions or decisions of administrative tribunals that may have a significant effect on the operations of the entity	If applicable, mandatory
17BE(r)	External scrutiny p.71	Particulars of any reports on the entity given by: a. the Auditor-General (other than a report under section 43 of the Act); or b. a Parliamentary Committee; or c. the Commonwealth Ombudsman; or d. the Office of the Australian Information Commissioner;	If applicable, mandatory
17BE(s)	N/A	An explanation of information not obtained from a subsidiary of the entity and the effect of not having the information on the annual report	If applicable, mandatory

PGPA Rule Reference	Part of Report	Description	Requirement
17BE(t)	N/A	Details of any indemnity that applied during the reporting period to the accountable authority, any member of the accountable authority or officer of the entity against a liability (including premiums paid, or agreed to be paid, for insurance against the authority, member or officer's liability for legal costs)	If applicable, mandatory
17BE(taa)	Audit Committee p.70	The following information about the audit committee for the entity: a. a direct electronic address of the charter determining the functions of the audit committee; b. the name of each member of the audit committee; c. the qualifications, knowledge, skills or experience of each member of the audit committee; d. information about each member's attendance at meetings of the audit committee; e. the remuneration of each member of the audit committee;	Mandatory
17BE(ta)	Executive remuneration p.82	Information about executive remuneration	Mandatory
17BF Disclosure requirements for government business enterprises			
17BF(1)(a)(i)	N/A	An assessment of significant changes in the entity's overall financial structure and financial conditions	If applicable, mandatory
17BF(1)(a)(ii)	N/A	An assessment of any events or risks that could cause financial information that is reported not to be indicative of future operations or financial conditions	If applicable, mandatory
17BF(1)(b)	N/A	Information on dividends paid or recommended	If applicable, mandatory
17BF(1)(c)	N/A	Details of any community service obligations the government business enterprise has including: a. an outline of actions taken to fulfil those obligations; and b. an assessment of the cost of fulfilling those obligations.	If applicable, mandatory
17BF(2)	N/A	A statement regarding the exclusion of information on the grounds that the information is commercially sensitive and would be likely to result in unreasonable commercial prejudice to the government business enterprise	If applicable, mandatory

Other legislative requirements

Legislation	Part of Report	Description	Requirement
<i>Work Health and Safety Act 2011</i> (Cth)	Work health and safety p.77	Work health and safety Report on matters mentioned in Schedule 2, Part 3, section 4(2)	If applicable, mandatory
<i>Commonwealth Electoral Act 1918</i> (Cth)	N/A	Advertising and market research Report on section 311A Annual returns of income and expenditure of Commonwealth Departments to: a. advertising agencies b. market research organisations c. polling organisations d. direct mail organisations e. media advertising organisations; and the persons or organisations to whom those amounts were paid.	If applicable, mandatory
<i>Environmental Protection and Biodiversity Conservation Act 1999</i> (Cth)	Ecological sustainability and environmental performance p.72	Ecologically sustainable development and environmental performance Report on section 516A Annual reports to deal with environmental matters	If applicable, mandatory
<i>Environmental Protection and Biodiversity Conservation Act 1999</i> (Cth)	APS Net Zero 2030 p.74	APS Net Zero 2030 Report on greenhouse gas emissions	Mandatory

Details of the accountable authority during 2022–23

Name	Qualifications of the accountable authority	Experience of the accountable authority	Position title/ Position held Executive/ Non-Executive	Period as the accountable authority or member within the reporting period		
				Date of commencement	Date of cessation	Number of meetings of accountable authority attended
Mr Andrew McConville	MSC (Ag Econ), University of Oxford, BAgEc (Hons), University of New England.	Prior to taking on the Chief Executive role at the MDBA Mr McConville was Chief Executive of the Australian Petroleum Production and Exploration Association, a position he occupied since April 2019. Before that, he worked for more than a decade with Syngenta, one of the world's leading agribusinesses. Earlier in his career, Mr McConville ran his own agribusiness public relations consultancy for almost 5 years and worked as Head of Corporate Affairs for Business at the National Australia Bank.	New Chief Executive	19 June 2022	18 June 2026	N/A

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